

Category : **ICU organization**

A79 - Sex differences in treatment intensity of adult intensive care patients: a systematic review and meta-analysis

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Introduction:

We undertook a systematic review to synthesise and evaluate the available literature on sex differences in the treatment intensity of adult intensive care unit (ICU) patients.

Methods:

Data sources: MEDLINE, EMBASE

Study selection: Two reviewers independently screened studies to identify observational studies of adult ICU patients that explicitly examined the association between sex and treatment intensity, specifically mechanical ventilation, renal replacement therapy, and length of stay.

Data extraction: We extracted data independently and in duplicate: mean age and illness severity of women and men, length of stay in ICU and hospital, use of and duration of mechanical ventilation and use of renal replacement therapy. We assessed risk of bias using the Newcastle-Ottawa scale and used a Dersimonian-Laird random effects model to calculate pooled odds ratios and mean differences between women and men

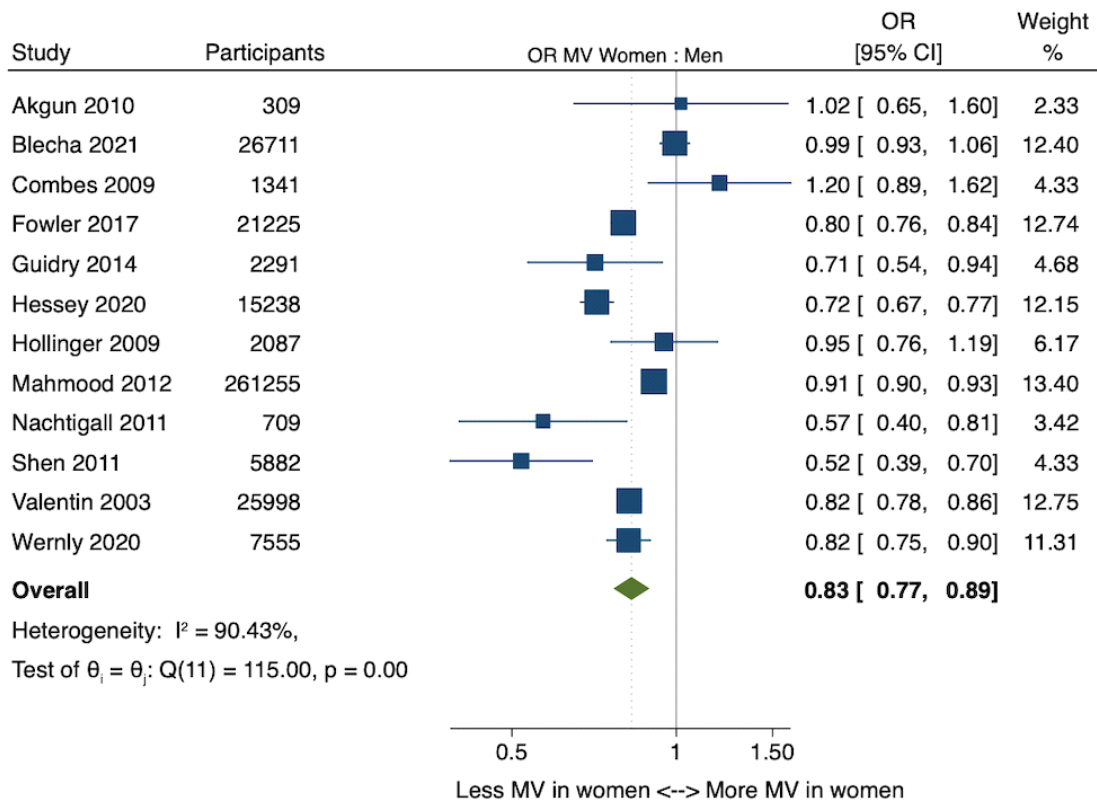
Results:

We identified 21 studies with a total of 545,538 participants (42.7% women). The study populations ranged from 246 to 261,255 participants (median 4420). Most studies were at high risk of bias in at least one domain, for example not adjusting treatment intensity outcomes for illness severity or other potential confounders. Women were less likely than men to receive invasive mechanical ventilation (MV pooled OR=0.83, 95% CI 0.77-0.89, I²=90%) or renal replacement therapy (RRT pooled 0.79, 95% CI 0.70-0.90, I²=76%) and had shorter mean length of stay in ICU than men (mean difference -0.24 days, 95% CI -0.37 to -0.12, I²=90%). These findings persisted in a pre-specified sensitivity analysis excluding studies at high risk of bias. Women and men had similar mean duration of mechanical ventilation and hospital length of stay.

Conclusion:

Compared to men, women were less likely to receive mechanical ventilation or renal replacement therapy and had shorter admissions to the ICU. There is substantial heterogeneity and risk of bias in the existing literature, therefore further research is warranted.

Image :



Use of mechanical ventilation in women compared to men in the ICU