

## Publication

## Gender differences in the provision of intensive care: a Bayesian approach

**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 4646075**Author(s)** Todorov, Atanas; Kaufmann, Fabian; Arslani, Ketina; Haider, Ahmed; Bengs, Susan; Goliasch, Georg; Zellweger, Núria; Tontsch, Janna; Sutter, Raoul; Buddeberg, Bigna; Hollinger, Alexa; Zemp, Elisabeth; Kaufmann, Mark; Siegemund, Martin; Gebhard, Cathérine; Gebhard, Caroline E.; Swiss Society of Intensive Care Medicine,**Author(s) at UniBasel** [Zemp Stutz, Elisabeth](#) ; [Sutter, Raoul Christian](#) ;**Year** 2021**Title** Gender differences in the provision of intensive care: a Bayesian approach**Journal** Intensive Care Medicine**Volume** 47**Number** 5**Pages / Article-Number** 577-587**Keywords** Cardiovascular disease; Critical illness; Gender bias; Survival; Women**Mesh terms** Adult; Bayes Theorem; Critical Care; Critical Illness, therapy; Female; Humans; Intensive Care Units; Male; Prospective Studies; Retrospective Studies; Sex Characteristics; Switzerland

**PURPOSE:** It is currently unclear whether management and outcomes of critically ill patients differ between men and women. We sought to assess the influence of age, sex and diagnoses on the probability of intensive care provision in critically ill cardio- and neurovascular patients in a large nationwide cohort in Switzerland. **METHODS:** Retrospective analysis of 450,948 adult patients with neuro- and cardiovascular disease admitted to all hospitals in Switzerland between 01/2012 and 12/2016 using Bayesian modeling. **RESULTS:** For all diagnoses and populations, median ages at admission were consistently higher for women than for men [75 (64;82) years in women vs. 68 (58;77) years in men,  $p = 65$  years (OR women:men 0.94 (0.89-0.99),  $p < 0.001$ ). Women  $< 45$  years had a similar ICU admission probability as men in the same age category [OR women:men 1.03 (0.94-1.13)], in spite of more severe illness. The odds to die were significantly higher in women than in men per unit increase in Simplified Acute Physiology Score (SAPS) II (OR 1.008 [1.004-1.012]). **CONCLUSION:** In the care of the critically ill, our study suggests that women are less likely to receive ICU treatment regardless of disease severity. Underuse of ICU care was most prominent in younger women  $< 45$  years. Although our study has several limitations that are imposed by the limited data available from the registries, our findings suggest that current ICU triage algorithms could benefit from careful reassessment. Further, and ideally prospective, studies are needed to confirm our findings.

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