
Sex and Gender Differences in Intensive Care



In recent years, there has been a growing focus on recognising sex and gender differences in diagnosis, clinical care, and outcomes. Several landmark publications have highlighted how women often receive unequal treatment compared to men, leading to worse outcomes.

Historically, there has been a significant oversight in research when it comes to considering sex differences. Women have been underrepresented in clinical trials and experimental studies, resulting in a lack of understanding of their unique healthcare requirements and differences in health outcomes.

Despite substantial progress in critical care medicine, there has been a lack of focus on understanding and addressing sex and gender disparities in the treatment and outcomes of patients in ICUs. It is important to note that "sex" relates to biological and physiological attributes like reproductive organs, chromosomes, and hormones, while "gender" encompasses sociocultural roles and human behaviour.

There is a notable absence of comprehensive data regarding gender-related topics in the ICU. Information about differences related to sex and gender concerning ICU admissions, clinical course, length of stay, mortality, and post-ICU burdens is often inconclusive and inconsistent. Additionally, when studying specific diagnoses in the ICU, variations emerge in terms of epidemiology, pathophysiology, clinical symptoms, severity, and response to treatment, primarily due to the impact of sex hormones on the immune and cardiovascular systems.

A recent narrative review explores how sex and gender influence the clinical course, management and outcomes of common critical care conditions. It also considers the possible presence of unconscious biases that could impact critical illness. The review delves into specific diagnoses that show a gender bias and examines these within the context of the underlying differences in physiology, anatomy, and pharmacology between sexes. The objective is to pinpoint areas with room for improvement in clinical care.

Several issues are highlighted in this review. Women are less frequently admitted to ICUs than men across various medical conditions. Additionally, women who experience out-of-hospital cardiac arrest (OHCA) are less likely to receive bystander CPR due to concerns of sexual misconduct accusations.

The paradox that men are physically stronger than women with fewer disabilities and/or comorbidities may also play a role in this discrepancy, where women experience comparable survival outcomes to men. Differences in ARDS management are also noted, with shorter-stature women less likely to receive lung-protective ventilation. In cases of acute myocardial infarction with cardiogenic shock (AMI-CS), women receive less guideline-recommended care, including coronary angiography, percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG), and mechanical circulatory support (MCS), as well as pharmacological therapies at discharge. Overall, women appear to be undertreated in the ICU despite their higher illness severity, including the application of organ support measures like renal replacement therapy, mechanical ventilation, invasive procedures, and early goal-directed therapies.

It is essential to understand and address the impact of sex and gender differences in the ICU to optimise patient care and outcomes. Personalising management while accounting for these differences is crucial for providing equitable, patient-centred care. Future research efforts should concentrate on uncovering the reasons behind these disparities and developing specific interventions to reduce them, ultimately improving outcomes for all critically ill patients.

The authors emphasise the need for research and adopting a standardised approach to integrating sex and gender considerations.

Source: [Intensive Care Medicine](#)

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