Presentation Abstracts

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Medical characterization and benchmarking of ventilatory care in critically ill patients: operational efficiency and quality of care

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Introduction: Invasive mechanical ventilation (IMV) is the most widely used vital medical support worldwide in a diverse context of indications, such as: medical treatment of severe respiratory failure conditions, trauma, elective surgical procedures, among others.[1,2] However, adequate management by the multidisciplinary team is essential to achieve the goal set out in the therapeutic plan, the guarantee of operational efficiency, the rational use of the resource, and the prevention of adverse events, especially episodes of infection. Thus, a discussion emerges about the medical efficiency of intensive therapies, critically analyzing performance, comparing with the best results to collaborate with the health system. Therefore, the analysis of medical characterization and medical performance allows a better understanding of the patient profile at the paying source, be it the public system or health insurers; of the progression and monitoring of resource use; and of the improvement of care practices of healthcare teams.[3] **Objective:** To characterize critically ill patients ventilated in intensive care by analyzing clinical performance. **Methods:** Retrospective cohort study, carried out between January 1, 2023 and April 30, 2024 in the critical care line of a university hospital in Rio de Janeiro, Brazil. Clinical patients aged 18 years or over admitted to the intensive care unit, who used invasive mechanical ventilation, were included from a database of the Epimed Monitor UTI Adulto®. **Results:** The general intensive care service used in the study is divided into six units, totaling 63 beds. During this period, there were 2,500 hospitalizations for medical reasons, 841 mechanically ventilated patients, representing 37.35% of the occupancy rate of the units, with an average length of stay in the ICUs of 18.78 days. The average age was 60 years, men (56.12%), average Charlson comorbidity index of 2.25, SAPS score of 62 points (average). It should be mentioned that 55.64% used vasoactive drugs, median IMV duration (days) was 10 with a standardized mortality rate (SMR, 95%CI) of 1.46 (1.43-1.47). According to the EPM (Epimed Prediction Model), SMR (95%CI) was 1.18 (1.17-1.20). In Brazil, we observed that the hospital had a better performance comparing the outcome. The SMR of public hospitals was 1.53 (1.52-1.55). However, from the perspective of operational efficiency, there are opportunities for improvement regarding the median IMC duration (days) of 4 and the average length of stay of 13.04 (days). **Conclusion:** The findings of this study reinforce the importance of patients' medical characterization, especially stratified by the use of medical resources. Therefore, benchmarking with monitoring and knowledge of patients' medical performance contributes to reducing unfavorable medical outcomes for critically ill patients compared to external scenarios, resulting in a tool for health care from a perspective of quality of care and patient safety.

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