

## Improving Management of ARDS



Acute respiratory distress syndrome (ARDS) poses a significant global health challenge, with high in-hospital mortality rates of approximately 40% despite advancements in supportive care. There's notable variability in patient management across different regions, with proven life-saving treatments like low tidal volume ventilation not uniformly implemented. ARDS is a diverse condition, suggesting that therapeutic responses can vary among patients, particularly across different demographics and settings. Long-term mortality remains elevated for ARDS survivors, especially in older individuals, emphasising the importance of extended follow-up. Evaluation of post-intensive care syndrome (PICS), characterised by persistent physical, cognitive, and mental health impairments, is crucial for these survivors. Both the severity of ARDS and its associated complications contribute to short and long-term mortality and disability, emphasising the need for early intervention strategies in ICU care. This perspective delves into the relationship between the acute phase of ARDS and long-term disability, proposing effective therapeutic approaches.

Persistent muscle weakness is a prevalent issue among ARDS survivors, significantly impacting their mobility and ability to perform daily tasks. Critical illness and treatments such as prolonged bed rest, excessive sedation, and the use of neuromuscular blocking agents during mechanical ventilation contribute to ICU-acquired weakness. Additionally, deep sedation heightens the risk of delirium and long-term cognitive impairment in ICU patients.

Corticosteroids are sometimes used to treat ARDS, especially in cases involving COVID-19. However, they can contribute to myopathy and muscle weakness, along with prolonged delirium that increases the risk of long-term cognitive impairment. The ideal dosage and duration of corticosteroid treatment remain unclear, and there's limited information regarding their long-term impact on muscle weakness and cognition in ARDS survivors. Mental health difficulties, including depression, anxiety, and post-traumatic stress disorder, are also prevalent among ARDS survivors, in addition to physical and cognitive challenges.

Efforts to tackle these complications highlight the importance of consistently applying the evidence-based ABCDEF bundle. This bundle entails daily pain management alongside early discontinuation of sedatives, avoidance of benzodiazepines, regular monitoring and treatment of delirium, early mobilisation, and involvement of family members in patient care.

The connection between complications during the acute phase of ARDS and long-term outcomes in survivors is significant. This underscores the importance of preventing and promptly treating these complications to enhance patient outcomes. Survivorship care should commence early, ideally upon admission to the ICU, as attention to detail during the acute phase greatly impacts outcomes. Monitoring methods and treatment ranges must be clearly defined due to the multifaceted nature of treatment-related complications. Long-term outcome assessment for ARDS survivors should be a top priority, emphasising the need for diagnosis, prevention, and treatment of PICS. Establishing ICU recovery or follow-up centers may aid in this process.

To improve ARDS patient outcomes, future efforts should focus on the entire patient journey from ICU admission to returning home. Collaboration among critical care, mental health/neuropsychology, and rehabilitation professionals, along with input from survivors and their families, is crucial. This collaborative approach should involve representatives from diverse geographic, economic, and social backgrounds to ensure relevance worldwide. Investing in such initiatives will facilitate a better understanding of modifiable risk factors and effective treatments, ultimately improving patient-centred outcomes globally.

In summary, ARDS presents a multifaceted global health dilemma with repercussions beyond the immediate phase. Recognising the connections between critical care interventions and long-term outcomes is crucial for devising effective treatment approaches and enhancing the quality of life for ARDS survivors.

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