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LONG-TERM CONSEQUENCES OF CRITICAL ILLNESS AND ICU CARE: POST-INTENSIVE CARE SYNDROME

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Advances in intensive care have improved survival from critical illness, increasing recognition of persistent morbidity after discharge. Post-intensive care syndrome (PICS) describes new or worsening physical, cognitive, and mental health impairments that develop following critical illness and persist beyond acute hospitalization. Related psychological difficulties among family members are termed PICS-family. Together, these conditions challenge conventional definitions of successful intensive care and emphasize the importance of recovery, independence, and quality of life.

This presentation reviews the spectrum of long-term consequences of critical illness, including chronic critical illness, persistent organ dysfunction, and PICS. Physical sequelae include intensive care unit (ICU)-acquired weakness, reduced exercise capacity, fatigue, and limitations in daily activities. Recovery of pulmonary function does not necessarily indicate restoration of functional capacity, and disability may continue for years. Cognitive impairments affect memory, attention, and executive function, while psychological manifestations include depression, anxiety, and post-traumatic stress symptoms. These overlapping problems may delay return to work, increase dependence on caregivers, and create social and economic burdens.

The development of PICS reflects interactions between pre-existing vulnerability, acute disease severity, and exposures during ICU treatment. Relevant factors include frailty, sepsis, respiratory failure, prolonged mechanical ventilation, immobilization, and delirium. Family members require consideration because uncertainty, caregiving responsibilities, and psychological distress can persist after discharge.

Prevention should begin during ICU admission and continue across transitions of care. The ABCDEF bundle provides a practical framework encompassing pain assessment and treatment, spontaneous awakening and breathing trials, appropriate analgesia and sedation, delirium assessment and prevention, early mobility, and family engagement. Guideline-based care also addresses sleep disruption and supports rehabilitation adapted to clinical stability and individual needs. After discharge, coordinated follow-up should assess physical function, cognition, psychological health, and caregiver needs, while facilitating access to rehabilitation and

appropriate specialist services. Although multidisciplinary recovery clinics can identify unmet needs, evidence regarding their effects on long-term outcomes remains limited.
Overall, PICS represents an important consequence of critical illness that requires sustained attention beyond hospital survival. Integrating prevention, individualized rehabilitation, family support, and structured assessment into critical care pathways may promote recovery. Future research should establish effective interventions and prioritize outcomes meaningful to survivors, including functional independence, participation in everyday life, and wellbeing.

Keywords: Critical care; Sepsis; Long-term outcomes; Chronic critical illness