

A Systematic Review of Fast-Track Extubation Protocols and Ventilator- Associated Pneumonia in Post- Cardiac Surgery Patients: An African Perspective from 2019

E, r, a, s, t, u, s, S, h, i, l, o, n, g, o, ,, K, a, v, e, t, o, T, j, i, k, u, u, a, ,, N, a,
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| Abstract

Ventilator-associated pneumonia (VAP) is a major cause of morbidity and mortality in post-cardiac surgery patients, leading to extended intensive care stays and higher costs. Fast-track extubation (FTE) protocols seek to shorten mechanical ventilation duration and may reduce VAP risk. Evidence for their effectiveness within African clinical settings, however, is not well consolidated. This systematic review aimed to synthesise literature on the impact of dedicated FTE protocols on VAP rates in adults after cardiac surgery, focusing on deriving insights applicable to African clinical practice. A systematic search of major electronic databases was performed. Pre-defined inclusion criteria captured primary studies investigating FTE protocols and VAP incidence in cardiac surgery. Study screening, selection, and data extraction were conducted independently by two reviewers. The quality of included studies was assessed using appropriate critical appraisal tools. The review identified a scarcity of primary research from African cardiac surgical centres. Synthesised data from global studies consistently indicated that implementing a structured FTE protocol is associated with a reduced incidence of VAP. A prominent finding was a reported relative reduction in VAP rates alongside decreased hours of mechanical ventilation. Although direct evidence from Africa is limited, international data strongly suggest that implementing a standardised FTE protocol can effectively reduce VAP in post-cardiac

surgery patients. This supports the potential adoption and formal evaluation of such protocols in relevant African hospitals. Cardiac surgery units in Africa should consider developing, implementing, and formally evaluating context-appropriate FTE protocols. Future primary research should be conducted within African centres to establish local efficacy and guide specific practice guidelines. fast-track extubation, ventilator-associated pneumonia, cardiac surgery, systematic review, Africa. This review consolidates the available evidence on FTE protocols and VAP, highlighting a significant evidence gap in Africa and providing a rationale for protocol implementation and further local research.
