

Tracheostomy Timing: Are We Meeting the Mark?

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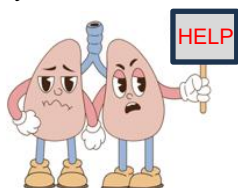


BACKGROUND

Trauma Intensive Care Unit (TICU) patients frequently require prolonged ventilation secondary to a variety of traumatic injuries. Prolonged endotracheal intubation can increase sedation requirements, complicate airway management, ventilator weaning, pulmonary hygiene, speech, and mobilization. An article by multiple authors, supports that early tracheostomy is associated with more ventilator-free days, greater likelihood of discharge home, and shorter ICU length of stay compared to standard tracheostomy (Min et al; Selvakumar et al., 2022; Nnorom et al., 2024). Evaluating our institutional tracheostomy timing against current trauma-specific evidence may identify opportunities to improve ventilator liberation, Intensive Care Unit (ICU) resource utilization, and enhance patient outcomes.

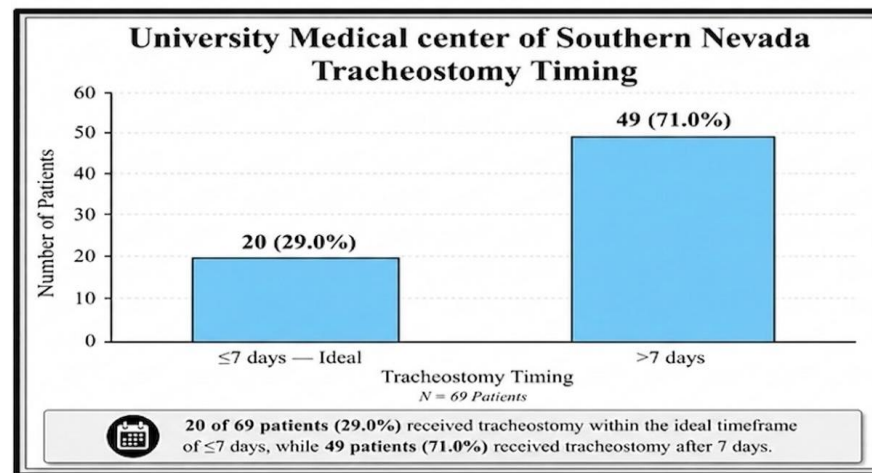
PURPOSE

To evaluate the timing of tracheostomy placement in adult TICU patients at our institution compared with current trauma-specific evidence and practice recommendations. Specifically, this project aims to determine whether tracheostomy placement timing in the TICU at University Medical Center of Southern Nevada is consistent with evidence supporting early tracheostomy, generally defined as placement within or equal to seven days of intubation.



METHODS

A retrospective review was conducted of trauma patients requiring ICU-level care who underwent tracheostomy between January 1st, 2025 and December 31st, 2025. Patients were identified through the trauma registry, and relevant clinical data were reviewed to evaluate the timing of tracheostomy placement following initial endotracheal intubation. The primary outcome was the number of days from initial intubation to tracheostomy placement. Our data was then organized and reviewed to determine if our institution reached the evidence-based goal of less than or equal to seven days.



RESULTS

During the 2025 review period, 69 trauma patients requiring ICU-level care underwent a tracheostomy procedure. Adult patients ranged from 17 to 86 years of age. The mean interval from initial intubation to tracheostomy placement was 11 days, indicating that the average institutional timing at our facility exceeded the ≤7-day timeframe commonly used to define early tracheostomy in trauma patients. This finding suggests an opportunity to improve practice by considering earlier tracheostomy for appropriately selected trauma patients anticipated to require prolonged mechanical ventilation.

CONCLUSIONS

- Patients have reduced duration of mechanical ventilation, reduced acquired ventilator associated pneumonia and decreased hospital length of stay (Nnorom et al., 2024)
- Optimal timing should remain individualized based on injury pattern, neurologic status, respiratory function, clinical stability, and anticipated duration of mechanical ventilation (Holevar et al., 2009; Min et al., 2026).
- Comparing institutional practice with current trauma-specific evidence will help identify opportunities to improve tracheostomy timing, promote consistency in clinical decision-making, and support evidence-based care for critically injured patients.

REFERENCES

