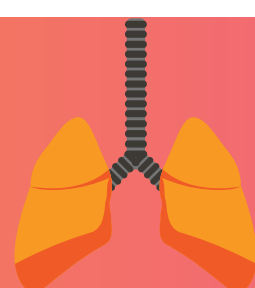


ACCUMULATION OF SUBGLOTTIC SECRETIONS: A CRITICAL ISSUE FOR AIRWAY MANAGEMENT



Contaminated secretions from the oropharynx or gastrointestinal tract can accumulate in the subglottic space above the inflated endotracheal tube (ETT) cuff.¹

CONSEQUENCES



Microaspiration¹



Tracheobronchial colonization¹



VAP¹



A strategy to avoid the progression of subglottic secretions into the lower respiratory tract and resultant microaspiration is to remove these secretions by subglottic secretion drainage (SSD), using a separate dorsal lumen that opens directly above the ETT cuff.^{2,3}

SUBGLOTTIC SECRETION DRAINAGE ETT-SPECIFIC VAP PREVENTION GUIDELINES

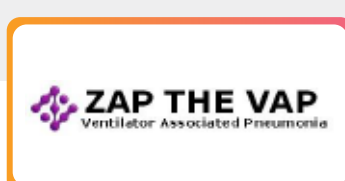
Society for Healthcare Epidemiology of America⁴

Recommends the use of ETT with subglottic secretion drainage ports for patients likely to require more than 48 or 72 hours of intubation



ZAP the VAP—Ventilator Associated Pneumonia^{5,6}

Subglottic secretion drainage is recommended for patients expected to be mechanically ventilated for more than 72 hours



Centers for Disease Control and Prevention⁷

Recommends the use of an ETT with a dorsal lumen above the endotracheal cuff to allow drainage by continuous or frequent intermittent suctioning of tracheal secretions that accumulate in patient's subglottic area



American Thoracic Society⁸

Recommends the use of specifically designed ETT for the continuous aspiration of subglottic secretions



VAP: Ventilator-associated pneumonia

DID YOU KNOW



A study was carried out in 5 ICUs in the same hospital in Belgium, to confirm the effect of subglottic secretion suctioning on VAP prevalence and assess the concomitant impact on ventilator-associated conditions (VAC) and antibiotic use.⁹

Study design: Randomized controlled clinical trial⁹

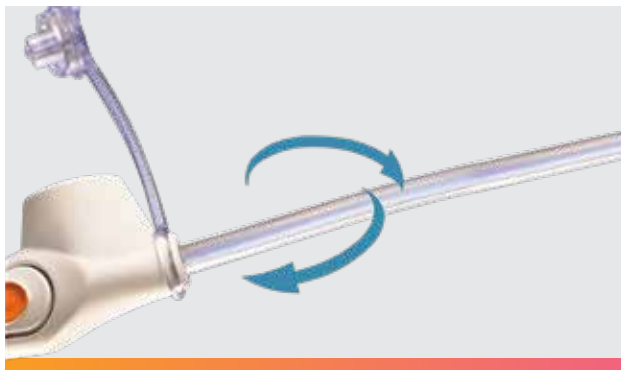
Patients (N): 352 adult intubated patients⁹

The patients were assigned to 2 groups—suction and no suction. The results obtained were as follows:⁹

	Suction	No Suction
VAP	8.8%	17.6%
VAP Rates	9.6 of 1,000 ventilator days	19.8 of 1,000 ventilator days
VAC prevalence	21.8%	22.5%
Total number of antibiotic days	61.6% 1,696 of the 2,754 ICU days	68.5% 1,965 of the 2,868 ICU days

OUR SOLUTION

MICROCUFF* Subglottic Suctioning Endotracheal Tube provides best protection against microaspiration by combining more effective subglottic suctioning with the advanced MICROCUFF* polyurethane cuff technology.^{2,10,11,12,13}



Suction

Suctions secretions more effectively and efficiently with a push of a button
The suction valve with integrated rinse port enables both suctioning and saline rinsing (to clear clogs)¹¹



Clear

Cylindrical-shaped, polyurethane cuff provides a superior tracheal seal, preventing leakage up to 93%¹³

References: 1. Pneumatikos IA, Dragoumanis CK, Bouras DE. Ventilator-associated pneumonia or endotracheal tube-associated pneumonia? An approach to the pathogenesis and preventive strategies emphasizing the importance of endotracheal tube. *Anesthesiology*. 2009; 110(3):673-80. 2. Lorente L, Lecuona M, Jiménez A, Mora ML, Sierra A. Influence of an endotracheal tube with polyurethane cuff and subglottic secretion drainage on pneumonia. *Am J Respir Crit Care Med*. 2007; 176(11):1079-83. 3. Blot SI, Poelaert J, Kollef M. How to avoid microaspiration? A key element for the prevention of ventilator-associated pneumonia in intubated ICU patients. *BMC Infect Dis*. 2014; 14(1):119. 4. Klompas M, Branson R, Eichenwald EC, et al; The Society for Healthcare Epidemiology of America. Strategies to prevent ventilator-associated pneumonia in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol*. 2014; 35(8):915-36. 5. Muscedere J, Dodek P, Keenan S, et al; VAP Guidelines Committee and the Canadian Critical Care Trials Group. Comprehensive evidence-based clinical practice guidelines for ventilator-associated pneumonia: prevention. *J Crit Care*. 2008; 23(1):126-37. 6. AHRQ. Head of Bed Elevation or Semirecumbent Positioning Literature Review. [Last reviewed 2017 Jan; cited 2019 Nov 01]. Available from: <https://www.ahrq.gov/hai/tools/mvp/modules/technical/head-bed-elevation-lit-review.html> 7. Tablan OC, Anderson LJ, Besser R, et al. Guidelines for preventing healthcare-associated pneumonia, 2003: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee. *MMWR Recomm Rep*. 2004; 53:1-36. 8. American Thoracic Society, Infectious Diseases Society of America. Guidelines for the management of adults with hospital-acquired, ventilator-associated, and healthcare-associated pneumonia. *Am J Respir Crit Care Med*. 2005; 171(4):388-416. 9. Damas P, Fripiat F, Ancion A, et al. Prevention of ventilator-associated pneumonia and ventilator-associated conditions: a randomized controlled trial with subglottic secretion suctioning. *Crit Care Med*. 2015; 43(1):22-30. 10. Freytag CC, Thies FL, König W, Welte T. Prolonged application of closed in-line suction catheters increases microbial colonization of the lower respiratory tract and bacterial growth on catheter surface. *Infection*. 2003; 31(1):31-7. 11. FDA 510K Clearance K120985, Data on file 12. Directions for Use for the Halaryd MICROCUFF Subglottic Suctioning Endotracheal Tube, Data on file 13. Evaluation of Fluid Leakage Past Tracheal Tube Cuffs: Effects of Tracheal Size and Cuff Pressure. Data on file #R151219.