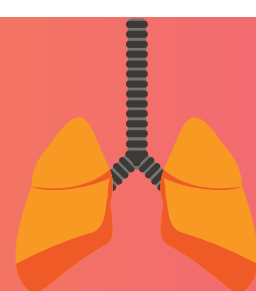


# DECONTAMINATION OF CATHETER TIPS POST SUCTIONING: A CRITICAL ISSUE IN SUCTIONING MANAGEMENT



Closed suction catheters are frequently used for suction treatment in patients requiring mechanical ventilation.<sup>1</sup>

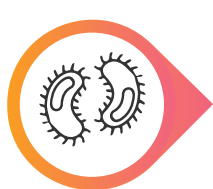
- They significantly decrease exposure of hospital staff to contaminated aerosols during the suction procedure.<sup>1</sup>

## ? PROBLEM OF COLONIZATION OF CATHETERS

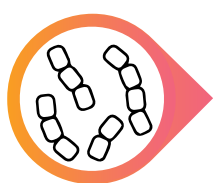
After 24 hours of use, various microorganisms may multiply on the catheters and increase colonization of the lower respiratory tract.<sup>1</sup>

- Bacterial aggregates from the patient’s tube and catheter system can be dispersed to the lower respiratory tract and may result in ventilator-associated pneumonia (VAP).<sup>1</sup>

Available microbiological data on the use of closed suction catheters *in vivo* for 24 hours demonstrated that:



89% of the catheters showed microbial growth<sup>1</sup>



40% of these catheters exhibited confluent colonization with microorganisms<sup>1</sup>

### Difficulties with prolonged use or frequent changes of closed suction catheters:



#### Increased microbial growth

Prolonged use of closed suction catheters for >24 hours (72 hours) results in **significantly enhanced microbial growth** on the catheter tips and adjacent catheter segment as the contaminated catheter tip is introduced into the contaminated tube of the patient several times a day.<sup>1</sup>



#### Increased cost

Although catheter change after every 24 hours is recommended, it can lead to **escalation of costs** for mechanical ventilation.<sup>1,2</sup>

### Difficulties with cleaning:

Normal saline instillation can result in additional dispersion of contaminated adherent material into the lower respiratory tract.<sup>1</sup>



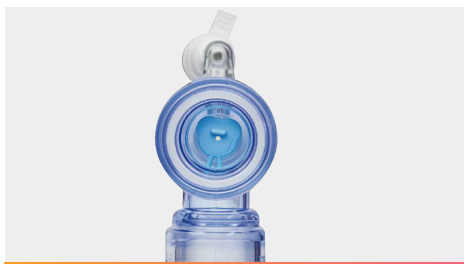
More effective self-cleaning mechanisms are needed to decontaminate the closed suction catheter surface post suctioning.<sup>1</sup>

## 💡 OUR SOLUTION

Avanos 72 hour Turbo-Cleaning Closed Suction System helps to reduce colonization at the catheter tip and the risk of VAE in ventilated patients.



Turbulent Cleansing Chamber creates a cleansing action, resulting in a cleaner catheter

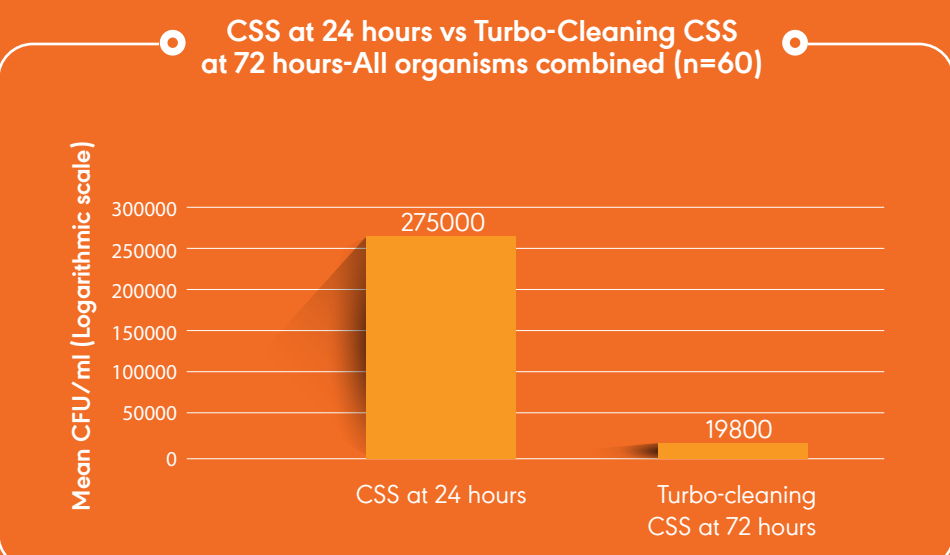


Manifold restrictor that closes under vacuum to allow the saline vial to empty into the catheter cleaning chamber without squeezing<sup>3</sup>

\*VAE: Ventilator-associated events; PEEP: Positive end-expiratory pressure

## DID YOU KNOW

Avanos Turbo-Cleaning Closed Suction Systems, at 72 hours show over an 89% reduction in mean catheter tip colonization compared to the standard 24-hr closed suction systems.<sup>3</sup>



References: 1. 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. 2. Kollef MH, Prentice D, Shapiro SD, et al. Mechanical ventilation with or without daily changes of in-line suction catheters. Am J Respir Crit Care Med. 1997;156(2):466-72. 3. Compared to Ballard\* TrachCare\* 24-hour closed suction systems. Ballard\* Critical Care Products Trach Care\* 72 Microbiology Report, Nelson Laboratories Final Reports, Laboratory Numbers 18343, 1639011.

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