

Medtronic

Shiley™ evac oral endotracheal tube
with TaperGuard™ cuff technology

Manage
secretions
more
effectively



The prevalence of hospital acquired infections

Hospital acquired infections (HAIs) including ventilator associated pneumonia (VAP) are a global problem. It's proven and documented that using care bundles reduce the incidence of these infections – yet the issue persists.

Subglottic secretion drainage (SSD), when bundled with other preventative recommendations, is influential in reducing acute respiratory failure.

VAP prevention bundles, including the utilization of endotracheal tube secretion drainage (ETT-SD), monitoring cuff pressure, and oral care with chlorhexidine were efficient in reducing the rate of VAP.¹

VAP prevalence²

Globally:

15.6%

United States:

13.5%

Europe:

19.4%

LATAM:

13.8%

APAC:

16.0%



Your partner in reducing hospital acquired infections

The movement toward a bundled approach has saved lives.^{3,4} Let's work together and reduce the numbers of HAI.

Aspiration of oral and/or gastric secretions is directly linked to the development of nosocomial infections such as VAP.⁵⁻⁷

Subglottic secretion drainage removes oral and/or gastric secretions from above the endotracheal tube cuff before they can be aspirated. And it must be done using a specialized endotracheal tube with a separate dorsal suction lumen.

Shiley™ evac technology helps reduce VAP

Shiley™ evac technology provides a safe, convenient way to suction the subglottic area above the cuff – with its integral suction lumen and evacuation port.

The Shiley™ evac oral endotracheal tube with TaperGuard™ cuff technology incorporates Shiley™ evac technology.⁸ This technology, when used in conjunction with a VAP bundle, has been shown to reduce VAP by an average of 50 percent in multiple studies over the last decade.⁹



VAP can be reduced by an average of⁹

50%

VAP can be dramatically reduced and ventilator days shortened by removing the secretions from the subglottic space.

– Walaszek, 2017

Innovative TaperGuard™ cuff technology

Both basic and specialized endotracheal tubes offer TaperGuard™ cuff technology which may help reduce the tracheal impact of intubation. The unique taper-shaped cuff design provides a smaller area of contact with the patient's airway than traditional barrel-shaped cuffs.¹⁰

The TaperGuard™ cuff design:

- Exerts an average of 29 percent less pressure on the trachea^{11,†}
- Reduces microaspiration compared to the barrel-shaped cuff on the Hi-Lo endotracheal tube.¹²
- Provides more uniform pressure distribution than Shiley™ Hi-Lo cuffs at equivalent intracuff pressures¹³
- Reduces microaspiration by as much as 90 percent compared to Shiley™ Hi-Lo cuffs¹⁴

Recommending use of SSD to reduce VAP

Based on clinical evidence, the following organizations recommend use of SSD:

- American Thoracic Society/Infectious Diseases Society of America (ATS/IDSA), Level I¹⁵
- Centers for Disease Control and Prevention (CDC), Category II¹⁶
- American Association of Critical-Care Nurses (AACN)¹⁷
- Agency for Healthcare Research and quality (AHRQ)¹⁸

†Compared to Shiley™ Hi-Lo endotracheal tube. Testing conducted on Shiley™ TaperGuard™ and Shiley™ TaperGuard™ evac endotracheal tubes.



The use of an endotracheal tube with subglottic access and intermittent suctioning decreased the incidence of VAP for critically ill patients.

– Mahmoodpoor, 2017

Clinical Literature

Author and publish date	Patient profile	Percent VAP rate study	Percent VAP rate control	Relative risk reduction	VAP interventions already in place during study
Mahmoodpoor, 2017 ¹⁹	276 mechanically ventilated patients for more than 72 hours	VAP rate per 1000 vent day 21.7%; early onset 10.1%; late onset 11.6%	VAP rate per 1000 vent day 33.3%; early onset 12.3%; late onset 21%	VAP rate per 1000 vent day P = 0.15; early on set P = 0.15; late onset P = 0.21	All patients received routine care including VAP prevention measures during ICU stay.
Madhavan, 2016 ²⁰	VAP data per 1000 ventilator days for 2009 and 2010. 2011 - 2014 VAP data per 1000 ventilator days per quarter	2011 4th quarter and 1st quarter in 2012 the VAP rate/1000 vent days was 1.7 in the 4th quarter of 2011. Since the 1st quarter of 2012 0 VAP rate/1000 vent days and stayed consistent until 4th quarter of 2014. The trend was observed to continue until 2nd quarter of 2015	2009 - 2010 the VAP rate was 2.3 per 1000 ventilator days and 1.2 per 100 ventilator days respectively. The VAP rate/1000 vent days in the 1st, 2nd, and 3rd quarter of 2011 were 2.1, 4.3, 3.1 respectively.	0 VAP rate/1000 vent days 1st quarter of 2012 and continued until 2nd quarter of 2015	VAP interventions already in place during study: Standard care of head of bed elevation, hand hygiene, maintenance of closed respiratory circuit with inline suctioning, patient mobility, protocol-based liberation and sedation. Four-hour oral care provided by a nurse for all intubated patients upon admission to the ICU until the day of liberation.
Hudson 2014 ²¹	Cardiac ICU patients requiring mechanical ventilation	1.9%	5.6%	66.1%	<ul style="list-style-type: none"> • Semirecumbent positioning • Daily evaluation of readiness for extubation • Oral care and decontamination with chlorhexidine • Initiation of safe enteral nutrition within 24 to 48 hours of ICU admission
Perez Granda 2013 ²²	Cardiac ICU patients requiring mechanical ventilation	16.46%	23.92%	31.2%	

Studies referenced in the table above were conducted comparing Shiley™ evac oral endotracheal tube with TaperGuard™ cuff technology vs. the Shiley™ hi-lo evac endotracheal tube. The Shiley™ evac oral endotracheal tube with TaperGuard™ cuff technology incorporates the same subglottic secretion drainage technology as the Shiley™ hi-lo evac endotracheal tube.⁸

Specifications

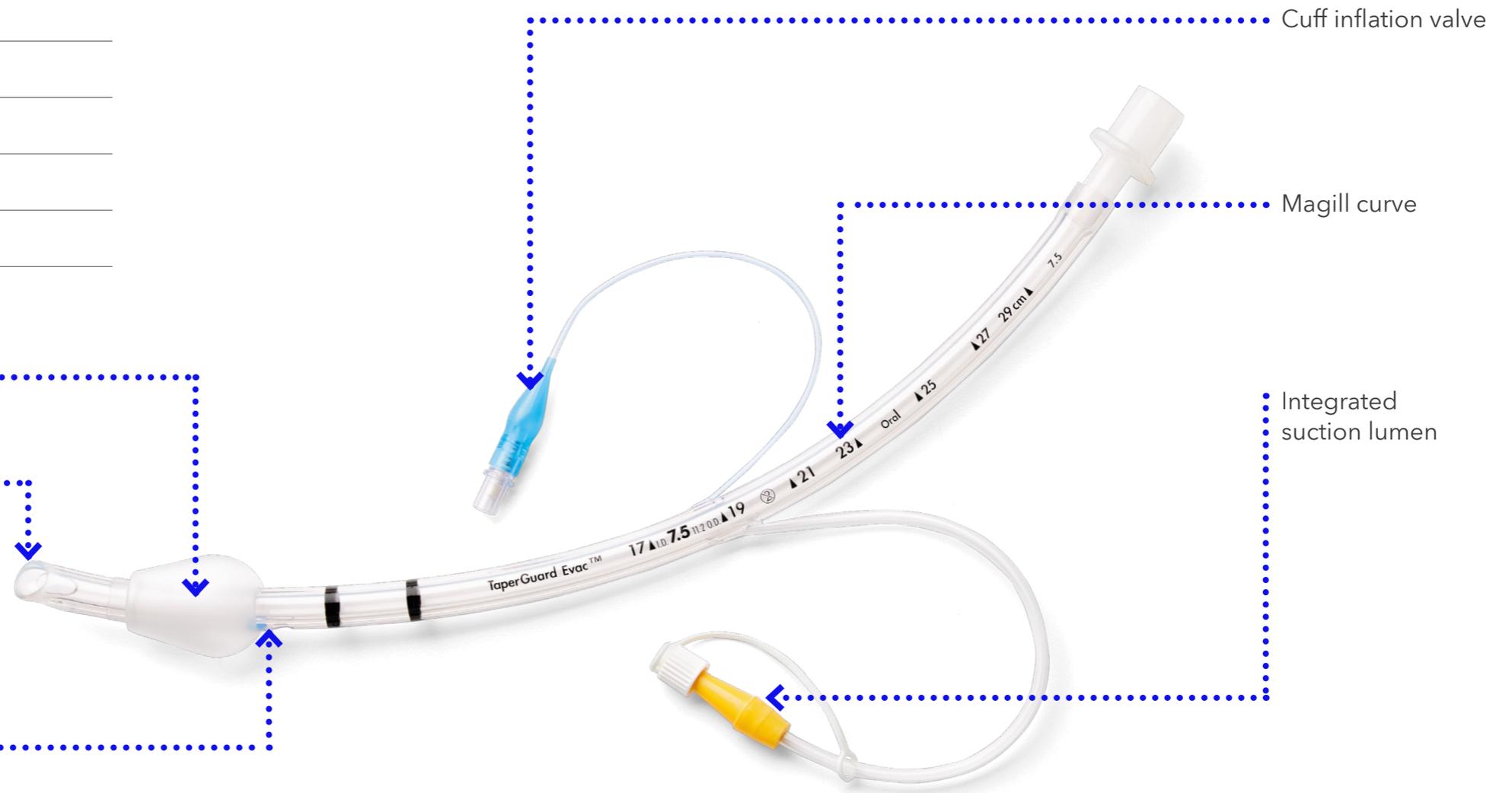
Shiley™ evac oral endotracheal tube with TaperGuard™ cuff technology

I.D.	O.D.	Catalog number
6.0 mm	9.0 mm	18860
6.5 mm	9.8 mm	18865
7.0 mm	10.4 mm	18870
7.5 mm	11.2 mm	18875
8.0 mm	11.8 mm	18880
8.5 mm	12.6 mm	18885
9.0 mm	13.1 mm	18890

Low-impact,¹⁰ low-pressure TaperGuard™ cuff

Hooded tip with Murphy eye

Evacuation port



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