



## VAP care range

Targeting Ventilator Associated Pneumonia (VAP)



**Critical Care** ▪ VAP care range

## Ventilator care range

Ventilator associated pneumonia (VAP) is a hospital acquired disease which has a significant impact on patient's health, length of stay and hospital cost and is a serious cause of mortality in compromised patients. VAP can be efficiently fought when applying certain strategies.

Increasing concerns over bacterial resistance, a higher demand on nursing time for increased hygiene measures and a constant pressure on hospital budgets has led to a number of strategies being identified in the ventilator care bundle to help in the reduction of VAP.

Ventilator care bundles provide a variety of key measures to follow including oral care programmes to reduce bacterial growth in the oral cavity, before it can be aspirated into the lungs.

Breathing system changes should only be made in line with hospital infection control policy, as every time a system is opened this action may allow bacteria to enter the patient's airway. Therefore, maintaining a closed breathing system by using a closed suction system further reduces this exposure.

Intersurgical can provide a range of products which can help the clinician deliver the ventilator care bundle to help in the reduction of VAP.

## Oral Care

A combination of oral care treatments (brushing and suctioning) in a proper oral care protocol means care providers can efficiently prevent oropharyngeal bacterial biofilm build-up. This in turn leads to a reduction of VAP and aspiration pneumonias and greatly reduces associated treatment costs.<sup>1,2,3.</sup>

**VAP Fact 1:** VAP occurs in 9–25% of all patients in ICU

### Four stages of plaque build up

Dental plaque is a biofilm made up of bacteria and their excretions, sitting mainly at the gum line and between teeth.



**VAP Fact 2:** Each case of VAP costs the hospital \$30,000–\$40,000

### Biofilm

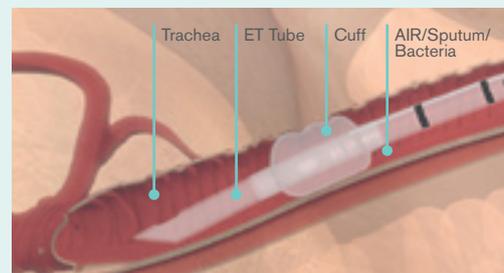
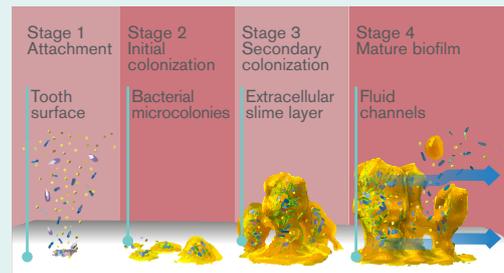
The biofilm will develop freshly after each intervention and will cover the complete tooth surface in only two hours. The biofilm protects pathogenic bacteria such as *MRSA* and *Klebsiella*, which are common problems in many intensive care units. Biofilm must be broken up prior to the application of antibacterial agents.



**VAP Fact 3:** VAP mortality rate is approximately 10–40%

### Aspiration

From the oropharynx saliva, mucus and biofilm build-up move to the ET tube cuff and may be aspirated into the lungs, as the cuff seal will never be 100%. When aspirated into the lungs, these bacteria may cause VAP and require treatment with antibiotics.



#### References

1. R. GARCIA, L. JENDRESKY, L. COLBERT, A. BAILEY, M. ZAMAN et M. MAJUMDER, Reducing Ventilator-Associated Pneumonia Through Advanced Oral-Dental Care: A 48-Month Study, *AJCC*, July 2009.
2. J. Rello, D. Ollendorf, G. Oster, M. Vera-Llonch, L. Bellm, R. Redman, M. Kollef: Epidemiology and outcomes of ventilator-associated-pneumonia in a large US database, *Chest*, December 2002.
3. L. Frampton: Preventing HCAI on the intensive care unit, *The Clinical Services Journal*, March 2014.



## Cleaning tools

For the most efficient removal of plaque, a soft bristle toothbrush is recommended. We can offer a large range of medical toothbrushes with soft bristles and cleaning implements for both adult and paediatric patients in intensive care. These have been designed with small, patient friendly brush heads which allow the user to gently and effectively reach all areas of the oral cavities.



### OroCare™ Mini toothbrush

Ideal for patients with a challenging oropharyngeal situation. The long slim neck of this brush assists the user in reaching all areas of the oral cavities.



### OroCare™ Aspire suction toothbrush

With built in direct attachment for the suction line this toothbrush eliminates the need for an additional yankauer. The long slim neck of this brush helps to reach all areas of the oral cavity without interfering with ET tubes and other equipment.



### OroCare™ Select suction toothbrush with 0.12% chlorhexidine ampoule

An ampoule containing 0.12% chlorhexidine is included with the Select to deliver the antibacterial fluid directly at the bristles. Suction may be conveniently controlled by the integrated thumb port.



### OroCare™ Sensitive oral suction wand

This unique suction wand is used for cleaning delicate gums and tissues. The integral moulded soft head provides a safer solution to the commonly used foam swab. The wand allows application of antibacterial solutions whilst gently cleaning the teeth and soft pallet.

Code	Description	Box Qty.
3011000	OroCare Mini toothbrush	30
3016000	OroCare Aspire suction toothbrush	25
3012100	OroCare Select suction toothbrush with 0.12% chlorhexidine ampoule	50
3017000	OroCare Sensitive oral suction wand	15

## Accessories

To complement the range of toothbrushes and suction wand we have developed a range of accessories, to assist in an efficient oral care programme in busy intensive care areas.



### OroCare™ suction line splitter

Designed for the simultaneous use of two suction lines on a single suction canister. This may become necessary, when a closed suction system is already attached to the vacuum source.



### OroCare™ 0.12% chlorhexidine mouthwash ampoule

The ampoules contain an antibacterial 0.12% chlorhexidine mouthwash for use with OroCare Select.



### OroClean tooth gel sachet

Tooth gel available in single use sachets. This prevents cross contamination of tooth gel tubes and the associated potential for recontamination of patients.

Code	Description	Box Qty.
3022000	OroCare suction line splitter	25
3025000	OroCare™ 0.12% chlorhexidine mouthwash ampoule - 14ml for use with the OroCare Select suction toothbrush	70
3021000	OroClean tooth gel sachet, 2g	250



## Daily protocol kits

In order to help in the introduction of an oral care protocol we have three basic day kits available for either four hour (q4) or eight hour (q8) interventions. There are also two complete kits including chlorhexidine disinfectant mouthwash for use every four (q4) or eight hours (q8), offering a simple to use single use solution straight from the pack.



3014100

Code	Description	Box Qty.
3014000	OroCare 24 hour day kit – q4 (four hour intervention kit)	10
3014001	OroCare 24 hour day kit – q4 (four hour intervention kit) without foam swabs	10
3014100	OroCare 24 hour day kit with chlorhexidine mouthwash – q4 (four hour intervention kit)	10
3015000	OroCare 24 hour day kit – q8 (eight hour intervention kit)	15
3015100	OroCare 24 hour day kit with chlorhexidine mouthwash – q8 (eight hour intervention kit)	15

## Single use treatment packs

For situations, where full daily kits are not suitable, we can also offer a variety of single use treatment packs. These contain a toothbrush, a choice of cleaning agents in a selection of pack options, dispenser cups and sponges for lip moisturising.



3016001



3016002



3016003



3016100

Code	Description	Box Qty.
3016001	OroCare Aspire suction toothbrush with chlorhexidine mouthwash, dispenser cup and foam swab	100
3016002	OroCare Aspire suction toothbrush with chlorhexidine mouthwash and tooth gel, dispenser cup and foam swab	100
3016003	OroCare mouthcare kit with chlorhexidine mouthwash and tooth gel, OroCare Aspire suction toothbrush OroCare Sensitive oral suction wand and dispenser cup	100
3016100	OroCare Aspire suction toothbrush with tooth gel	25



[www.intersurgical.com/info/oralcare](http://www.intersurgical.com/info/oralcare)



## Closed suction systems

Closed suction greatly reduces the potential for contamination from the bacteria which cause VAP. This enables a clinician to clear the lungs of secretions whilst maintaining ventilation and minimising contamination with the least possible disruption to the patient.

Another important factor in infection control is the cough reflex of the patient. By using a closed suction system the care provider reduces the risk of cross infection by aerosolised pathogens.

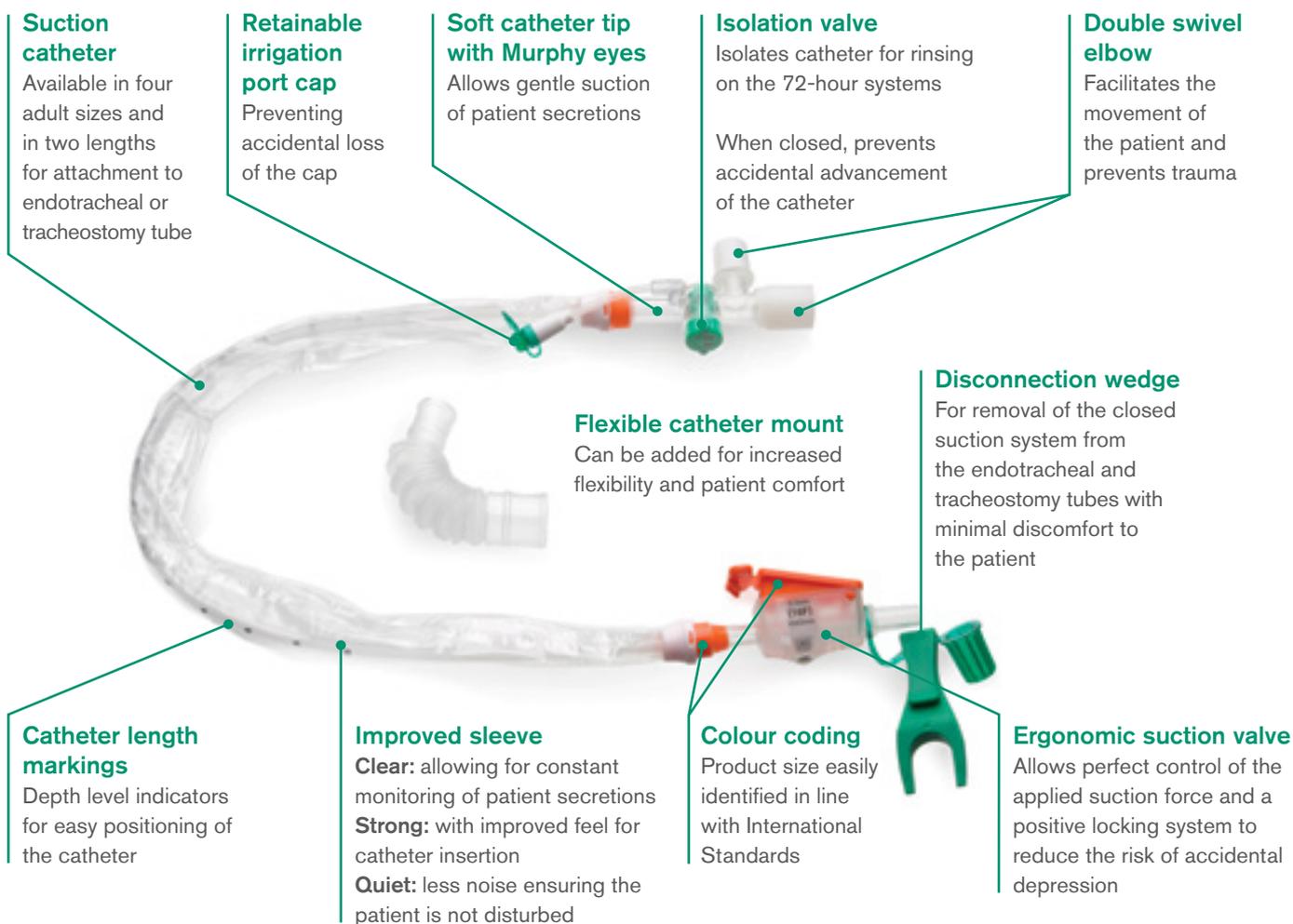
TrachSeal™ features an ultra-clear, soft sleeve allowing the clinician greater feel when inserting the catheter with optimum visibility for blockage assessments. Our suction control valve is responsive and allows for single handed control of the applied suction force. The positive locking mechanism is designed to prevent suction being accidentally applied.

Trachseal™ closed suction systems are available for 24 hour or 72 hour usage depending on patient requirements. There are two length options to allow attachment to either endotracheal or tracheostomy tubes. The endotracheal products feature a catheter length of 54cm and the tracheostomy tube variants have a catheter length of 30.5cm.

All Intersurgical TrachSeal systems are supplied with:

1. Day stickers which easily identify change requirements
2. 15F–22F catheter mount for flexible connection to the patient
3. A disconnection wedge for removal of the closed suction system from the endotracheal and tracheostomy tubes with minimal discomfort to the patient





**24 hour TrachSeal**

Code	Description	Size	Box Qty.
● 3240002	TrachSeal adult <b>endotracheal</b> closed suction system, 24 hour	F16	15
● 3240001	TrachSeal adult <b>endotracheal</b> closed suction system, 24 hour	F14	15
○ 3240000	TrachSeal adult <b>endotracheal</b> closed suction system, 24 hour	F12	15
● 3240003	TrachSeal adult <b>endotracheal</b> closed suction system, 24 hour	F10	15
● 3240007	TrachSeal adult <b>tracheostomy</b> closed suction system, 24 hour	F16	15
● 3240006	TrachSeal adult <b>tracheostomy</b> closed suction system, 24 hour	F14	15
○ 3240005	TrachSeal adult <b>tracheostomy</b> closed suction system, 24 hour	F12	15
● 3240004	TrachSeal adult <b>tracheostomy</b> closed suction system, 24 hour	F10	15

**72 hour TrachSeal**

Code	Description	Size	Box Qty.
● 3720002	TrachSeal adult <b>endotracheal</b> closed suction system, 72 hour	F16	15
● 3720001	TrachSeal adult <b>endotracheal</b> closed suction system, 72 hour	F14	15
○ 3720000	TrachSeal adult <b>endotracheal</b> closed suction system, 72 hour	F12	15
● 3720003	TrachSeal adult <b>endotracheal</b> closed suction system, 72 hour	F10	15
● 3720007	TrachSeal adult <b>tracheostomy</b> closed suction system, 72 hour	F16	15
● 3720006	TrachSeal adult <b>tracheostomy</b> closed suction system, 72 hour	F14	15
○ 3720005	TrachSeal adult <b>tracheostomy</b> closed suction system, 72 hour	F12	15
● 3720004	TrachSeal adult <b>tracheostomy</b> closed suction system, 72 hour	F10	15



### 24 hour TrachSeal with saline ampoules

Code	Description	Size	Box Qty.
● 3241002	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 24hour	F16	15
● 3241001	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 24hour	F14	15
○ 3241000	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 24hour	F12	15
● 3241003	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 24hour	F10	15
● 3241007	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 24hour	F16	15
● 3241006	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 24hour	F14	15
○ 3241005	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 24hour	F12	15
● 3241004	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 24hour	F10	15

### 72 hour TrachSeal with saline ampoules

Code	Description	Size	Box Qty.
● 3721002	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 72hour	F16	15
● 3721001	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 72hour	F14	15
○ 3721000	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 72hour	F12	15
● 3721003	TrachSeal adult <b>endotracheal</b> closed suction system with saline ampoules, 72hour	F10	15
● 3721007	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 72hour	F16	15
● 3721006	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 72hour	F14	15
○ 3721005	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 72hour	F12	15
● 3721004	TrachSeal adult <b>tracheostomy</b> closed suction system with saline ampoules, 72hour	F10	15

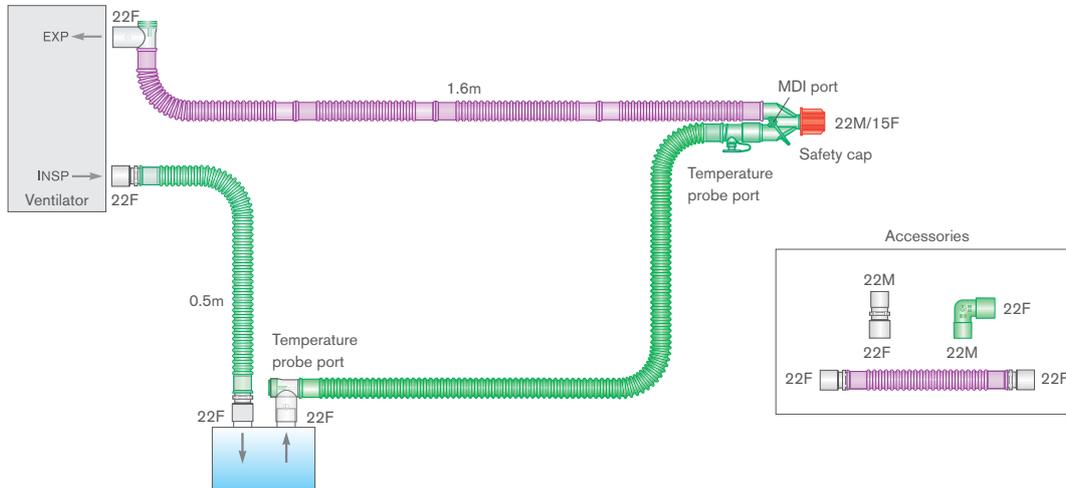
### Accessories

Code	Description	Box Qty.
3022000	Suction line splitter for use with closed suction and oral care lines	25
3700000	0.9% NaCl solution for closed suction systems, 15ml	70

The Intersurgical range also includes a wide range of single use breathing systems, including Silver Knight™ anti-microbial systems which contain silver-based ions to further enhance patient safety to aid the prevention of cross contamination.

A wide range of accessories and breathing filters are available, all of which can play a part in the infection control strategy and the reduction of cross infection and potentially VAP.

A few products available in our extensive range are outlined below. Visit our website to view our full range.



system illustrated

Code	Description	Box Qty.
2026100	22mm Silver Knight anti-microbial Flextube dual heated wire breathing system with 0.5m limb, 1.6m	10
2026310	22mm Flextube dual heated wire breathing system with auto fill chamber and 0.5m limb, 1.6m	7

### Accessories

<p>Code 3521000 Box Qty. 75 Compressible Volume 26-50ml</p>	<p>Code 1898000 Box Qty. 35 Compressible Volume 12ml</p>	<p>Code 3505000 Box Qty. 50 Compressible Volume 48ml</p>
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### Breathing filters and HMEFs

<p>Description Air-Guard® Clear Code 1790000 Box Qty. 50</p>	<p>Description Air-Guard Code 1944000 Box Qty. 70</p>	<p>Description Filter-Therm™ Code 1941000 Box Qty. 70</p>
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Silver Knight



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