



## OroCare™

The complete programme for oral hygiene



**Targeting Ventilator-Associated Pneumonia**



## Reduce VAP with Oral Care<sup>1</sup>

Ventilator-Associated Pneumonia (VAP) causes prolonged intubation and a prolonged stay in intensive care units (ICU) with the associated costs. It is also a significant cause of mortality in compromised patients.<sup>2</sup>

A combination of oral care treatments (brushing and suctioning) as part of a structured oral care protocol allows care providers to efficiently prevent build up of oropharyngeal plaque and biofilm. This in turn can lead to a reduction of VAP and aspiration pneumonia and greatly reduces associated treatment costs.<sup>1, 3, 4</sup>

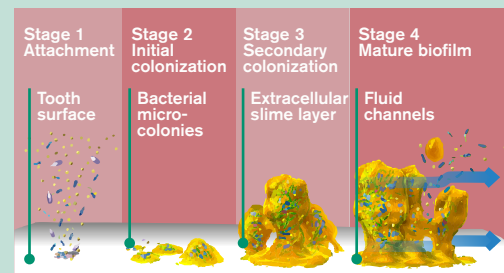
**VAP Fact 1:** VAP occurs in 10-20% of all patients in ICU.<sup>1</sup>

**VAP Fact 2:** Each case of VAP costs the hospital \$30,000–\$40,000.<sup>3</sup>

**VAP Fact 3:** VAP leads to increased mortality rate and length of ICU stay.<sup>5</sup>

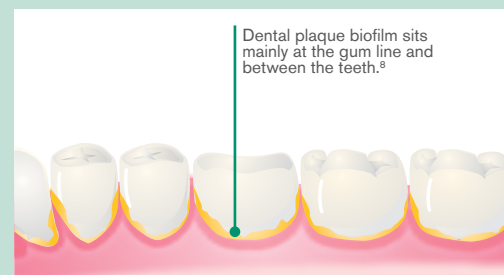
### Four stages of plaque build up<sup>6</sup>

Dental plaque is a biofilm made up predominantly of bacteria, sitting mainly at the gum line and between teeth.<sup>7, 8</sup>



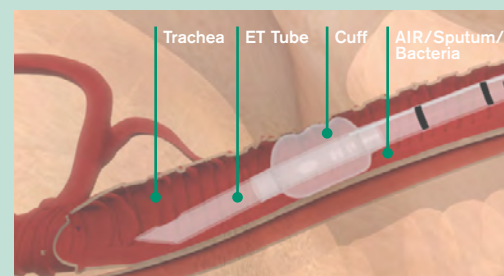
### Dental plaque biofilm

Fresh plaque will develop after each intervention and will cover the tooth surface within hours. The biofilm protects bacteria such as *Staphylococcus aureus* and *Klebsiella pneumoniae*, which are common oral microbes. Biofilm must be broken up prior to the application of antibacterial agents.<sup>7, 9</sup>



### Aspiration

From the oropharynx saliva, mucous and bacteria accumulate at 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.<sup>10, 11</sup>



## Supporting videos

For correct set-up and connection of the Intersurgical Oral Care products, please view the appropriate video.



[Find out more](#)

[Watch the video](#)

### 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. Ladbroke E, Khaw D, Bouchoucha S, Hutchinson A. A systematic scoping review of the cost-impact of ventilator-associated pneumonia (VAP) intervention bundles in intensive care. *Am J Infect Control*. 2021 Jul;49(7):928-936. doi: 10.1016/j.ajic.2020.11.027. Epub 2020 Dec 7. PMID: 33301781.
3. J. Rello, D. Ollendorf, G. Oster, M. Vera-Llonch, L. Bellm, R. Redman, M. Kellef: Epidemiology and outcomes of ventilator-associated-pneumonia in a large US database, *Chest*, December 2002.
4. Ehrenzeller S, Klompas M. Association Between Daily Toothbrushing and Hospital-Acquired Pneumonia: A Systematic Review and Meta-Analysis. *JAMA Intern Med*. 2024 Feb 1;184(2):131-142. doi: 10.1001/jamainternmed.2023.6638. PMID: 38109100; PMCID: PMC10728803.
5. Hellyer TP, Ewan V, Wilson P, Simpson AJ. The Intensive Care Society recommended bundle of interventions for the prevention of ventilator-associated pneumonia. *J Intensive Care Soc*. 2016 Aug;17(3):238-243. doi: 10.1177/1751143716644461. Epub 2016 Apr 20. PMID: 28979497; PMCID: PMC5606527.
6. Nield-Gehrig, J.S. and Willmann, D.E., 2005. Dental plaque biofilms. *Journal of Practical Hygiene*, 14(16), pp.1-6.
7. Marsh, P.D. Dental plaque as a biofilm and a microbial community – implications for health and disease. *BMC Oral Health* 6 (Suppl 1), S14 (2006). <https://doi.org/10.1186/1472-6831-6-S1-S14>
8. Jakubovics, N.S., Goodman, S.D., Mashburn Warren, L., Stafford, G.P. and Cieplik, F., 2021. The dental plaque biofilm matrix. *Periodontology* 2000, 86(1), pp.32-56.
9. Rathbun KP, Bourgault AM, Sole ML. Oral Microbes in Hospital-Acquired Pneumonia: Practice and Research Implications. *Crit Care Nurse*. 2022 Jun 1;42(3):47-54. doi: 10.4037/ccn2022672. PMID: 35640896; PMCID: PMC9923822.
10. Paju S, Scannapieco FA. Oral biofilms, periodontitis, and pulmonary infections. *Oral Dis*. 2007 Nov;13(6):508-12. doi: 10.1111/j.1601-0825.2007.01410.x. PMID: 17944664; PMCID: PMC2258093.
11. Klompas M, Branson R, Cawcutt K, Crist M, Eichenwald EC, Greene LR, Lee G, Maragakis LL, Powell K, Priebe GP, Speck K, Yokoe DS, Berenholtz SM. Strategies to prevent ventilator-associated pneumonia, ventilator-associated events, and nonventilator hospital-acquired pneumonia in acute-care hospitals: 2022 Update. *Infect Control Hosp Epidemiol*. 2022 Jun;43(6):687-713. doi: 10.1017/ice.2022.88. Epub 2022 May 20. PMID: 35589091; PMCID: PMC10903147.



## Cleaning tools

For the most effective removal of plaque and biofilms regular mechanical toothbrushing should be carried out. Intersurgical offer a range of toothbrushes with soft bristles and cleaning implements for both adult and paediatric patients. These have been designed with small brush heads which facilitate access to the oral cavity.<sup>4</sup>

3011000



### OroCare™ Mini toothbrush

Ideal for patients with difficult oral care needs. The long slim neck of this brush assists the user in accessing the oral cavity.

3016000



### 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 assists the user in accessing the oral cavity without interfering with ET tubes and other equipment.

3017000



### 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 mouthwash solutions or water whilst gently cleaning the teeth and soft pallet.

Code	Description	Box Qty.
3011000	OroCare Mini toothbrush	30
3016000	OroCare Aspire suction toothbrush	25
3017000	OroCare Sensitive oral suction wand	15

## Accessories

To complement the range Intersurgical has developed a range of accessories, to assist in an effective oral care programme.

3023000



### OroCare suction valve — stepped connector

Features a rotating control that allows suction to be paused as required. Designed for use with funnel style suction tubing.

3024000



### OroCare suction valve — flexible connector

Features a rotating control that allows suction to be paused as required. Designed for use with finger-tip style suction tubing.

3022000



### 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.

3021000



### 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.
3023000	OroCare suction control valve, flexible – stepped connector	25
3024000	OroCare suction control valve, flexible – flexible connector	25
3022000	OroCare suction line splitter	25
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 mouthwash for use every four (q4) or eight hours (q8), offering a single use solution straight from the pack.

[Make an enquiry](#)
[Watch the video](#)


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, Intersurgical offer a variety of single use treatment packs. A selection of pack options contain a toothbrush, a choice of cleaning agents, dispenser cups and foam swabs 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

[Find out more](#)

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Intersurgical Ltd, Crane House, Molly Millars Lane, Wokingham, Berkshire, RG41 2RZ, UK  
T: +44 (0)118 965 6300 info@intersurgical.com www.intersurgical.com



The manufacturer Intersurgical Ltd is certified to ISO 14001:2015, ISO 9001:2015, ISO 13485:2016 and MDSAP

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