

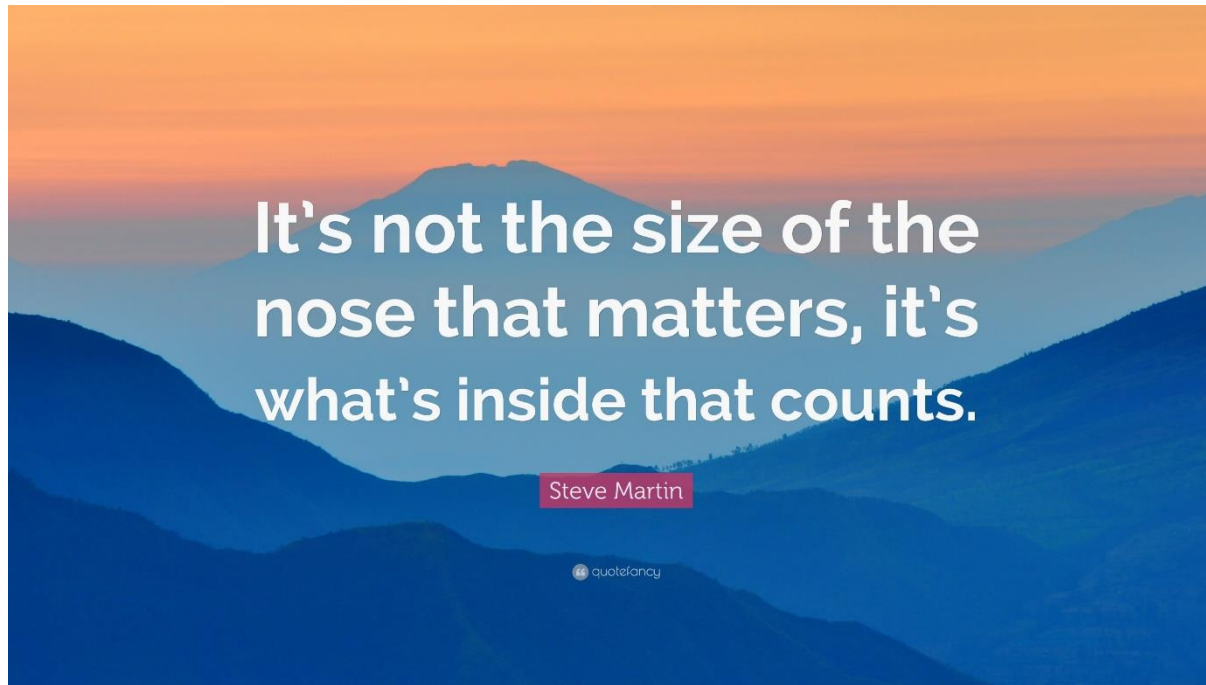
PDI's Profend[®]

Nasal Decolonization Kit: an introduction

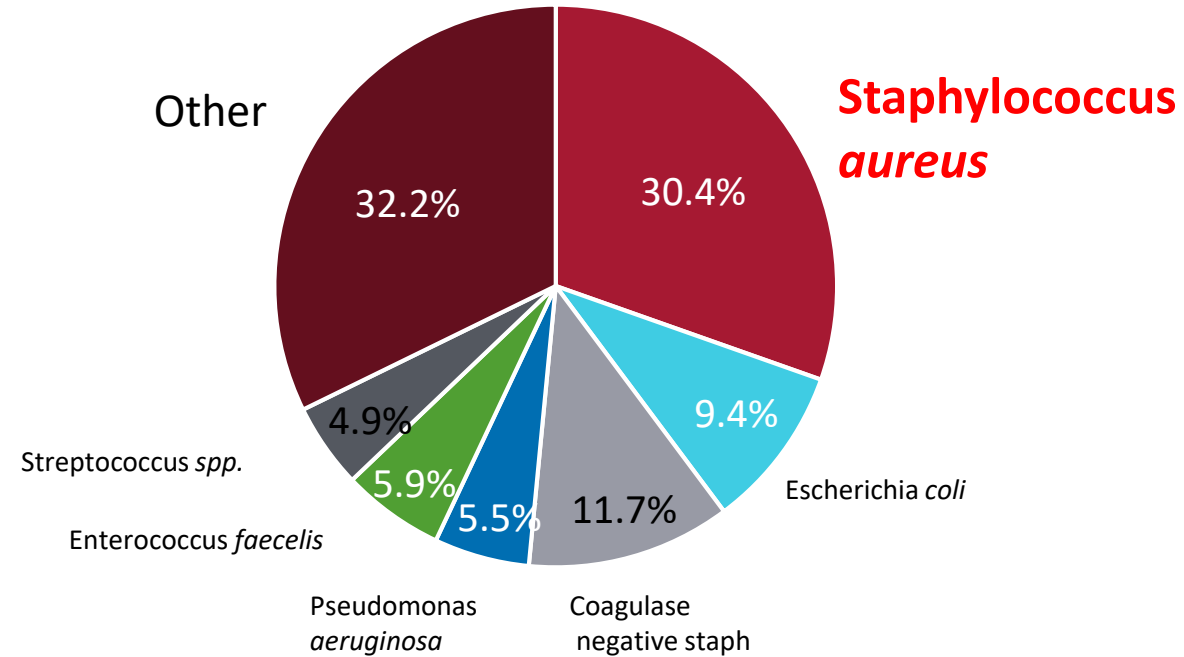


Natural Reservoirs: the Nose

- Humans are natural reservoirs for *S. aureus*.
- Part of the normal skin flora but most commonly carried nasally.
- 20-60% of healthy adults are colonized with *S. aureus*, and 10-20% are persistent carriers.



Common HAI Causing Pathogens



- For surgical site infections (SSIs) 85% *S. aureus* had the same DNA as the organism found in the nares ([N. Engl. J. Med. 346 1871–1877.](#))
- For *S. aureus* bloodstream infections (BSIs), the relatedness between nares and blood was 82.2% ([N Engl J Med. 344\(1\):11-6](#))
- For *S. aureus* pneumonia, the correlation has been reported as high as 94% ([J Clin Microbiol. 43\(7\): 3491–3493](#))

Profend™ Nasal Decolonization – CDC recommendations prior to surgery



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Healthcare-associated Infections

Staph BSI Prevention Strategies

orthopedic, and neurosurgery), unless known to be *S. aureus* negative, use an intranasal antistaphylococcal antibiotic/antiseptic (e.g. mupirocin or iodophor) and chlorhexidine wash or wipes prior to surgery.

- Possible Regimens
 - Intranasal antistaphylococcal antibiotic/antiseptic
 - Mupirocin twice daily to each nare for the 5 days prior to day of surgery
 - OR
 - 2 applications of nasal Iodophor (at least 5%) to each nare within 2 hours prior to surgery
 - Chlorhexidine
 - Daily chlorhexidine wash or wipes for up to 5 days prior to surgery



Profend™ Nasal Decolonization – CDC Recommendations for ICU patients



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Healthcare-associated Infections


Staph BSI Prevention Strategies




- **Core Strategy:**

- Pursue a strategy to reduce carriage of *S. aureus* among all patients admitted to intensive care units (ICUs) (see table for summary of source control strategies) including:

- Apply intranasal mupirocin twice a day to each nare for 5 days in conjunction with daily chlorhexidine bathing for duration of ICU admission

- 
- Intranasal iodophor could be considered as an alternative to intranasal mupirocin

- For more information see: Universal ICU Decolonization: An Enhanced Protocol. [Agency for Healthcare Research and Quality \(AHRQ\)](#)  .

SOURCE: <https://www.cdc.gov/hai/prevent/staph-prevention-strategies.html>

Research: Mupirocin Limitations

- Nearly **a third of patients** were unable to be screened or decolonized because their procedures were **emergent**.
 - Under the **ideal conditions** of ZERO mupirocin resistance, decolonization **failed more than a quarter of the time**.
 - Nearly half the patients who self-described as being compliant with the decolonization protocol were found to have **no mupirocin** in their nares when assessed using a highly sensitive methodology.
 - **Ten percent** of patients who failed decolonization developed mediastinitis and patients colonized on the day of surgery were more than **9 times** more likely to develop an infection.
 - There is evidence of rising mupirocin resistant strains, with up to 10% of strains showing resistance in the US.
- + Patients who screen negative in the days leading up to surgery can still be positive (transiently colonized) before going to the operating room

+ Nicolas, Roxane, et al. "Evaluation of effectiveness and compliance with the mupirocin nasal ointment part of Staphylococcus aureus decolonization in real life using UPLC-MS/MS mupirocin quantification." *Journal of Antimicrobial Chemotherapy* 75.6 (2020): 1623-1630.

+ Dadashi, Masoud, et al. "Mupirocin resistance in Staphylococcus aureus: A systematic review and meta-analysis." *Journal of Global Antimicrobial Resistance* 20 (2020): 238-247.

GUIDELINE FOR PREOPERATIVE PATIENT SKIN ANTISEPSIS NOW INCLUDES NASAL DECOLONIZATION PROGRAM

published May 13, 2021

- + Convene an interdisciplinary team
- + Determine the need to implement a pre-operative MRSA/MSSA decolonization program: perform risk-based approach, evaluate resources
- + Establish a pre-operative SA decolonization program: vertical, horizontal, or blended program
 - Determine screening method, protocol for urgent procedures
 - **An alternative to nasal decolonization with mupirocin is the use of an antiseptic such as povidone iodine (5%-10%)**
 - Implement the pre-operative SA decolonization program as defined by the interdisciplinary team.
 - Establish timing for initiation/completion of the decolonization protocol
 - Define a plan for procuring the decolonization agent.
 - Provide patients/HCW with education re: benefits of decolonization and the patient's role
- + Monitor the decolonization regimen as part of an overall SSI surveillance and quality improvement program.
 - Assess patients' adherence to the decolonization regimen
 - If using an antimicrobial, include surveillance for antibiotic resistance as part of the antimicrobial stewardship program.

PDI's Profend[®]

Nasal Decolonization Kit: an introduction



Profend[®] Nasal Decolonization Kit

- + 10% Povidone Iodine (PVP-I) for proven efficacy and antibiotic stewardship
- + Quick, 60 second total treatment time
 - 4 swabsticks per patient
 - 2 swabsticks per nostril for 15 seconds each
- + Easy-to-use, pre-saturated swabstick with unique “snap & swab” design
- + Neat, dry-handle with small applicator minimizes mess
- + Assured treatment compliance as product is applied by clinician 1 hour prior to surgery
- + Suitable for use in the OR and ICU as well as for MRSA and *S. aureus*-colonized patients¹
- + Kills 99.7% of *S. aureus* at 10 minutes, 1 hour and 99.9% at 12 hours²



¹Sievert D. Antimicrobial-resistant pathogens associated with healthcare associated infections: summary of data reported to the NHSN at the CDC, 2009-2010. *Infect Control Hosp Epidemiol.* 2013;34(1):1-14.

²PDI *in vivo* Study 0113-CTEVO

Profend™ rises above the competition!

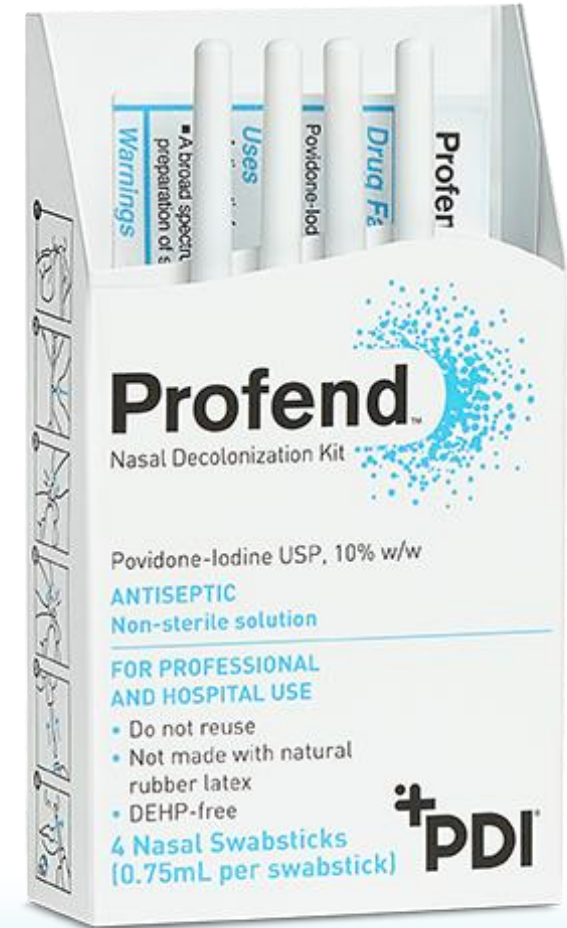
Product Parameter	Profend	Mupirocin & Bactroban	Other PVP-I Nasal products	Nozin Alcohol Popswab
Approved area of application	Anterior nares	Anterior nares	Anterior nares	Nasal vestibule (no mucous membranes)
# of applications per day	Two	Two	Two	Two
Treatment time	60 seconds	5 days	120-160 seconds	6 rotations per nostril, 2x
Visual Indication of application	Yes	Yes	Yes	No

*Bactroban, as of January 2018

Profend[®] Nasal Decolonization of *Staphylococcus aureus*¹

99.7% @ 10 MIN

99.9% @ 12 HR



¹PDI *in vivo* Study 0113-CTEVO

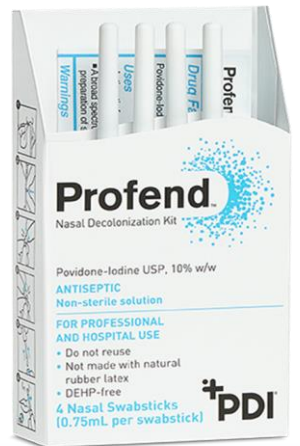
Profend[®] Nasal Decolonization Kit overview

- + 4 swabsticks per patient unit
- + 12 patient units per shelf unit
- + 4 shelf units per case
(smallest orderable quantity)

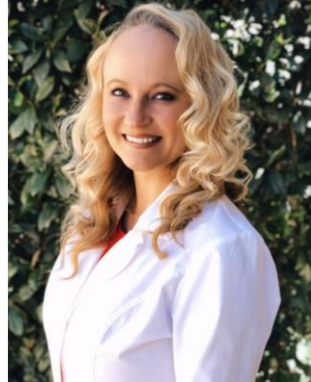


How Does Profend[®] Nasal Kit fit into the Guidelines?

- + Can be used in universal, targeted and blended decolonization programs.
- + Decolonization with **Profend[®]**, in coordination with ASHP surgical antibiotic prophylaxis, may make it possible to no longer require MSSA screening but MRSA screening may still be necessary
- + Treatment can efficiently be done via standing physician order.
- + **Compliant with CDC and AORN Strategies (mupirocin/iodophor) and SHEA (anti-staphylococcal agent)**
- + Ideal for *urgent* procedures: 99.7% reduction of SA at 10 minutes (in vivo)
- + Application is simple and efficient and easily fits within the pre-operative workflow. (establish timing)
- + Applied by the pre-operative nurse to ensure compliance.
- + a 10% PVP-I, it is a broad-spectrum antiseptic with no known resistance.
- + PDI provides educational materials to explain the “why” to the patient and HCW



Your **PDI** Team



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