

Independent Studies on Nasal Decolonization & Antiseptic Treatment

EFFICACY OF NASAL DECOLONIZATION

- [Perioperative participation of orthopedic patients and surgical staff in a nasal decolonization intervention to reduce Staphylococcus spp surgical site infections](#)
American Journal of Infection Control
 - With the use of alcohol-based decolonization mean infection rates significantly decreased by 81% from 1.76 to 0.33 per 100 surgeries during the 15-month trial, when compared with the prior 9-month baseline.
- [Reduction of nasal Staphylococcus aureus carriage in health care professionals by treatment with a nonantibiotic, alcohol-based nasal antiseptic](#)
American Journal of Infection Control
 - The study demonstrates the effectiveness of single-day, alcohol-based nasal antiseptic treatment in reducing vestibular colonization by S aureus and other potentially pathogenic bacteria in HCPs at an urban hospital center.

ALCOHOL EFFICACY

> vs Mupirocin

- [Reduction of Hospital-Onset Methicillin-Resistant Staphylococcus aureus \(MRSA\) Bacteremia in an Acute Care Hospital: Impact of Bundles and Universal Decolonization](#)
Open Forum Infectious Diseases
 - Use of nasal mupirocin was replaced with alcohol-based nasal sanitizer. The SIR decreased from 3.66 to 0.97 from baseline to postintervention periods (P = 0.003). The largest decrease in cases and SIR was attained using combined hospital-wide daily CHG bathing, alcohol-based nasal sanitizer, and alcohol wipes for patient hand hygiene.
- [Nasal decolonization: What antimicrobials are most effective prior to surgery?](#)
American Journal of Infection Control
 - Concerns over Mupirocin resistance have led to the development of alternative nasal decolonization agents. Alcohol-based nasal antiseptic therapy is a promising new intervention in reducing S aureus nasal colonization.

> vs Iodine

- [Impacts of Coordinated, Hospital-wide Use of Alcohol-based Nasal Decolonization on Infection Rates, Patient Care and Cost Savings](#)
American Journal of Infection Control
 - Two-phase study replacing Povidone Iodine (PI) nasal decolonization with alcohol based nasal decolonization antiseptic to unify Infection Prevention (IP) protocols. Staphylococcus aureus surgical site infection (SSI) rates decreased by 50.7%. Contact Precautions (CP) use decreased by 39%, while maintaining low rates of MRSA bacteremia.
 - Annualized savings of \$223,150, net of decolonization costs, were estimated from CP, screening and SSI cost reductions.

IMMEDIATE PRE- AND POST-OPERATIVE USE

- [Improving patient compliance with preoperative universal decolonization to reduce surgical infection rate and costs](#)
Open Forum Infectious Diseases
 - After switching to alcohol based nasal antiseptic (from the PVI nasal antiseptic), there was a reduction in surgical site infections (SSI) of 64% from 0.58 to 0.21/100 spine fusion procedures and a reduction in SSI of

100% from 0.46 to 0.00/100 laminectomy procedures.

- Estimated cost avoidance of \$127K associated with infections prevented. Cost savings of \$37K resulting from switching from nasal PVI to alcohol based nasal antiseptic, with greater patient satisfaction.
- [Universal Preoperative Antiseptic Nasal and Skin Decolonization for Reduction in SSI and Associated Costs](#)
American Journal of Infection Control
 - During the 6-month study period, the addition of pre-operative nasal antiseptic to existing CHG bathing practice for all surgical patients resulted in a 59% reduction in all cause surgical site infections (SSI) for all procedures, from an average monthly baseline rate of 0.61 to an average monthly rate of 0.25.
 - Reduction numbers represent 22 fewer SSIs with an associated estimated cost avoidance of \$457,270 (\$20,785/infection).
 - Staff survey revealed that 86% of respondents were very or extremely satisfied with efficacy and ease of use of the product, and >80% preferred the nasal antiseptic over mupirocin.

7-DAY PRE- AND POST-OPERATIVE REGIMEN

- [Perioperative participation of orthopedic patients and surgical staff in a nasal decolonization intervention to reduce Staphylococcus spp surgical site infections](#)
American Journal of Infection Control
 - With the use of alcohol-based decolonization, mean infection rates significantly decreased by 81% from 1.76 to 0.33 per 100 surgeries during the 15-month trial, when compared with the prior 9-month baseline.
- [A Novel Protocol for Nasal Decolonization Using Prolonged Application of an Alcohol-Based Nasal Antiseptic Reduces Surgical Site Infections in Total Joint Arthroplasty Patients: A Retrospective Cohort Study](#)
Surgical Infections
 - Patients receiving alcohol-based nasal decolonization had a lower rate of SSI compared with controls not receiving nasal decolonization (0.64% [5/779] vs. 1.55% [10/647]; p = 0.048.
 - When used pre-and post-operatively, alcohol-based nasal decolonization of bacteria in patients undergoing total joint arthroplasty led to a substantial decrease in SSIs.

UNIVERSAL DECOLONIZATION

- [Does Universal Nasal Decolonization with an Alcohol-Based Nasal Antiseptic Reduce Infection Risk and Cost?](#)
Open Forum Infectious Diseases
 - Compared with baseline there was a decrease in MRSA bacteremia from 3/1,000 patient-days to 0/1,000 patient-days, a reduction in Contact Precautions (CP) from 3.78 to 1.53/1,000 patient-days, a reduction in nasal screens from 3,874 to 605, and a reduction of all-cause (Gram-negative and Gram-positive) SSI after all surgical procedures from 3/4,313 procedures to 0/4,872 procedures.
 - After accounting for the cost of the nasal antiseptic, the reduction in gowns, gloves and nasal screening tests resulted in \$104,099.91 costs avoided
- [A Safe, More Cost-Effective Protocol: Universal Decolonization vs. MRSA Screening and Contact Precautions](#)
Open Forum Infectious Diseases
 - Compared with prior 12-month period, during the universal decolonization trial, there was a 42% reduction in isolation days (\$118/day), a 74% reduction in nasal PCR tests (\$36/each), and an 11% decrease in the monthly use of gowns (\$12/each).
 - Total cost avoidance, after accounting for the cost of the alcohol-based nasal antiseptic and CHG soap, was \$1,394,685.
- [Can a nasal and skin decolonization protocol safely replace contact precautions for MRSA-colonized patients?](#)
American Journal of Infection Control
 - Analysis of the 7 hospitals combined resulted in an overall decrease in isolation days of 88.33% (P = .000). Net cost savings of \$430,604 for the 10-month study.

** This compendium reflects historical research studies in support of alcohol-based decolonization methodologies. For specific case studies related to the use of the new SaniSwab product please visit www.nevoainc.com.*