**XF-73 Nasal Literature Review**

**Period: 24/07/2025 – 24/08/2025**

[Scientific Highlights 1](#_Toc163992243)

[SA Decolonisation 1](#_Toc163992244)

[SA / MRSA Colonisation / Infection 1](#_Toc163992245)

[Guidelines / Prevention Practice 1](#_Toc163992246)

[Breast Surgery 1](#_Toc163992247)

[Mupirocin resistance 2](#_Toc163992248)

[Competitors 2](#_Toc163992249)

Scientific Highlights

1. Bacterial Decolonization With Mupirocin Ointment for Acute Radiation Oral Mucositis Prevention: A Phase 3 Randomized Clinical Trial.
2. Reduction of Hospital-Onset Methicillin-Resistant Staphylococcus aureus (MRSA) Bacteremia with the Use of Twice Daily Alcohol-Based Nasal Antiseptic in Intensive Care Units.
3. Impact of routine chlorhexidine bathing and nasal iodophor on MDRO colonization and environmental contamination in nursing homes.

SA Decolonisation

1. Prevalence, species identification, and antibiotic resistance of Staphylococci in dogs visiting veterinary clinics in Vietnam.
2. Shenling Tongqiao powder targets TGF-β1/Smad-Wnt/β-catenin axis to suppress epithelial-mesenchymal transition in chronic rhinosinusitis.
3. Bacterial co-infection and secondary infection in critically ill patients with acute respiratory failure of coronavirus disease 2019.
4. Comparing Alcohol-Based Nasal Antiseptic to Mupirocin and Iodophor for Preventing Surgical Site Infection: A Meta-Analysis.
5. Virulence and Antibiotic Resistance Profiles of Staphylococcus aureus Isolated from Epidermal Growth Factor Receptor Inhibitors-Associated Skin Lesions.
6. Antimicrobial-Resistant Staphylococcus spp. Harbored by Hedgehogs (Erinaceus europaeus) in Central Italy.
7. High Prevalence of Multidrug-Resistant Bacterial Colonization Among Patients and Healthcare Workers in a Rural Ethiopian Hospital.
8. Rapid and actionable nasal-swab screening supports antimicrobial stewardship in patients with pneumonia: a prospective study.
9. Prevalence, characterization and antibiogram of Staphylococcus aureus isolates from bovine and swine population in Bareilly, Uttar Pradesh, India.
10. Evaluating the burden of respiratory tract infections among mortality cases in Karachi, Pakistan: a post-pandemic surveillance analysis.
11. Retrospective Cross-Sectional Study of Occupational Infection Risk With Zoonotic Pathogens in Austrian Veterinary Practitioners in the Year 2022.
12. Risk Factors for Methicillin-Resistant Staphylococcus aureus Carriers in the Intensive Care Unit: A Single-Center, Retrospective Cohort Study in Japan.
13. Staphylococcal Toxic Shock Syndrome Associated With a Cosmetic Rhinoplasty Procedure.
14. Impact of Methicillin-Resistant Staphylococcus aureus Nasal PCR Versus Culture on Vancomycin Utilization in Pneumonia Management.
15. Bacterial infections and pathogenic situations: The case of Staphylococcus lugdunensis.
16. Staphylococcus aureus phenol-soluble modulins have dispersal and anti-aggregation activity towards corynebacteria.
17. Methicillin-resistant Staphylococcus aureus nasal swabs: trends in use and association with outcomes.
18. Nasal carriage of Staphylococcus aureus in rural China: molecular epidemiology and antimicrobial susceptibility.
19. Impaired humoral and T helper cell responses to toxic shock syndrome toxin-1 (TSST-1) in granulomatosis with polyangiitis.
20. Regular nasal irrigation modulates nasal microbiota and improves symptoms in allergic rhinitis patients: a retrospective study.
21. Association between prior hospitalization and nasal carriage of methicillin-resistant Staphylococcus aureus (MRSA) in community-dwelling U.S. adults: Evidence from NHANES.
22. Non-Healing Nasolabial Ulcerated Plaque: A Clinicopathologic Challenge.
23. CC5 MRSA isolates from goats and the farm environment are phylogenetically linked to isolates recovered from human clinical samples.
24. Longitudinal prevalence and co-carriage of pathogens associated with nursing home acquired pneumonia in three long-term care facilities.

SA / MRSA Colonisation / Infection

1. Epicutaneous Staphylococcus aureus initiates cross-tissue IL-36R signaling for neutrophilic lung inflammation in a model of the atopic march.
2. Adherence to Quality-of-Care Indicators and Mortality Outcomes in Patients With MRSA Bacteremia: A Post Hoc Analysis of the CAMERA2 Randomized Clinical Trial.
3. Orthopedic Implant Infection Management: Prevention, Barrier Breakthrough, and Immunomodulation.
4. Infective Endocarditis in an Intravenous Drug User: Clinical Challenges, Ethical Dilemmas, and Multidisciplinary Management.
5. Virulence traits and bacterial interactions within the complex microbial population in urinary double-J catheters.
6. Outcomes of One-Stage Total Hip Arthroplasty with Postoperative Intra-Articular Antibiotic Infusion for Chronic Infection after Periarticular Internal Fixation Failure.
7. Antibacterial Efficacy of Oregano-Carbon Nanotubes Coated Silk Sutures: An In Vitro Experimental Study.
8. Genomic epidemiology and antimicrobial resistance of Corynebacterium macclintockiae, the predominant species of human pathogens within the Corynebacterium jeikeium complex.
9. A Case of Stevens-Johnson Syndrome Triggered by Methicillin-Resistant Staphylococcus aureus Infection During Pembrolizumab Treatment for Lung Squamous Cell Carcinoma.
10. A multifunctional hydrogel system with synergistic effects against Staphylococcus aureus infections and inflammation in perioperative cataract surgery.
11. Epidemiology and prognostic factors of necrotizing fasciitis in resource-limited regions based on 119 cases.
12. Silent spread of pathogens in hospital settings: a one-week molecular epidemiologic study.
13. Retrospective Evaluation of Empiric Vancomycin Therapy for Infectious Workups in Relation to Methicillin-Resistant Staphylococcus aureus (MRSA) Risk Factors in the Neonatal Intensive Care Unit.
14. Assessment of dry-fogged hydrogen peroxide as an "untact" room disinfection automation system for rapid terminal decontamination of a single isolation room in a healthcare institution.
15. Organism profiles and empirical treatments for periprosthetic joint infections.
16. Eventual resolution of pulmonary cavities following septic pulmonary embolism secondary to right-sided infective endocarditis.
17. Electrospun surgical meshes with bioactive coatings for preventing postoperative infections in hernia repair.
18. Disc penetration sign: an distinctive MRI feature as a predictor of surgical necessity in pyogenic spondylitis.
19. Evaluation of Staphylococcus simulans inhibition of Staphylococcus aureus infection by an in vivo murine mastitis model.
20. Monitoring methicillin-resistant Staphylococcus aureus prevalence in Taiwan: a hospital-based surveillance study from 2022 to 2024.
21. Nasopharyngeal Staphylococcus aureus Isolation and Bacterial Culture Profiles in COVID-19 Patients: A Comparative Study Based on Lung Involvement.
22. [Skin Microbiome and Dermatitis: Focusing on Two Distinct Skin Diseases, Atopic Dermatitis and Androgenetic Alopecia].
23. The new SCCmec type methicillin-resistant Staphylococcus aureus carried CRISPR-Cas system isolated from a pig in China.
24. Conflict zone medical evacuations catalyzing antimicrobial resistance spread and threatening regional health: A retrospective comparative observational study.
25. Do skin bacteriostatic agents reduce acute radiodermatitis in breast cancer patients? A prospective interventional study.
26. High prevalence of multidrug-resistant and ESBL-producing bacteria in a primary healthcare facility in Accra, Ghana: A cross-sectional study.
27. Minimally Invasive Aspiration of Tricuspid Valve Vegetation in Recurrent Methicillin-Susceptible Staphylococcus aureus Endocarditis.
28. Assessment of the anti-biofilm effect of UV-C irradiation (254 nm) against healthcare associated infections related microorganisms.
29. Mortality of malignant otitis externa: A prevalence meta-analysis.
30. Prevalence and antibiotic resistance profiles of ESKAPE pathogens in the neonatal intensive care unit of the women and newborn hospital in Lusaka, Zambia.
31. [Antibiotic Stewardship in Nosocomial Pneumonia].
32. Fast Hemostatic, Antimicrobial Multifunctional Gelatin-Based Hydrogel Dressing Loading Bifunctional Cu/ZIF-8 for Accelerated Wound Healing.
33. Utilization of probiotics against virulence factors of Staphylococcus aureus in bovine mastitis.
34. Nationwide Surveillance of Antibacterial Susceptibility in Bacterial Respiratory Pathogens in Japan, 2022-2023.
35. SAIGE II: The Role of Staphylococcus aureus in Skin Barrier Dysfunction and the Development and Severity of Atopic Dermatitis in Young Children.
36. Association of antiphospholipid syndrome with infective endocarditis and sepsis induced by Staphylococcus aureus: A U.S. nationwide inpatient sample analysis.
37. Prevalence and pattern of antibiotic use and resistance among Iraqi patients: a cross-sectional study.
38. Diagnostic and Therapeutic Challenges in Multifocal MRSA Pyomyositis: A Case Report.
39. Emerging Antibiotic Resistance Pattern in a Neonatal Intensive Care Unit in Pokhara, Nepal.
40. Microbiologic analysis of 140 patients undergoing revision total knee arthroplasty due to periprosthetic joint infection and aseptic loosening: droplet digital PCR analysis.
41. Fabrication and characterization of metoprolol succinate loaded chitosan- guar gum based bio scaffolds for infected wound healing and tissue regeneration: In vitro and in vivo assessment.
42. Integrated Microneedle Aptasensing Platform toward Point-of-Care Monitoring of Bacterial Infections and Treatment.
43. Assessing the Potential of Antimicrobial Blue Light (aBL) to Manage Biofilm Burden at the Skin-Implant Interface of Percutaneous Osseointegrated Implants.
44. Bacterial profile and antimicrobial resistance patterns among pediatrics patients with suspected bloodstream infections in Ethiopia: a systematic review and meta-analysis.
45. 1D Nanofiber-2D Nanosheet Assembled 3D Bioinspired Dressings for Treating Exuding Infected Wounds.
46. Race, ethnicity and risk for colonisation and infection with key bacterial pathogens: a scoping review.
47. Construction and validation of a predictive in-hospital mortality nomogram in patients with staphylococcus aureus bloodstream infection.
48. Infective Endocarditis in Pediatric Patients with Congenital Heart Disease: Results from a National Multicenter Study.
49. An Acid-Oxidising Solution Containing Hypochlorous Acid Reduces Staphylococcus aureus and Improves Bacterial Diversity in Epidermolysis Bullosa Wounds.
50. Electrospun membranes from natural polymers with Quercetin: design and characterization, antioxidant and antimicrobial activity, and potential for skin reinnervation in chronic wounds.
51. Bayesian Inference of Nosocomial Methicillin-resistant Staphylococcus aureus Transmission Rates in an Urban Safety-Net Hospital.
52. Bottom-up sono-enzymatic approach to build antimicrobial and antifouling nano-enabled coatings on urinary catheters.
53. The prognostic implications of comorbidities in septic arthritis.
54. Microbial diversity in cutaneous leishmaniasis lesions and potential implications for disease progression and treatment outcomes.
55. Staphylococcal pneumonia associated with Panton-Valentine leucocidin (PVL) toxin.
56. Impact of human lifestyle on the pathogenic potential of urban wastewater.
57. Electroconductive Antibacterial Bioinks Enable Electrical Stimulation Enhancement of Proliferation and Elongation of Human Skin Fibroblasts.
58. Antibacterial molybdenum disulfide with silver phosphate coating on titanium fixator in rabbit models of rib fracture infection.
59. The wound microbiome associated with deep sternal wound infection: a scoping review.
60. Surface Modification of Medical-Grade Titanium and Polyvinyl Chloride with a Novel Catechol-Terminated Compound Containing Zwitterionic Sulfobetaine Functionality for Antibacterial Application.
61. Relationship between endotoxin core and staphylococcal antibody levels and outcome following transcatheter aortic valve implantation (TAVI).
62. Inhaled Corticosteroids and Risk of Staphylococcus aureus Isolation in Bronchiectasis: A Register-Based Cohort Study.
63. Tanshinone in acne therapeutics: Integrating molecular mechanisms, drug development, and multimodal treatment strategies.
64. Evaluating the Risk of Postoperative Infection and Complications in Lumbar Spine Surgery Patients with Preoperative Methicillin-resistant Staphylococcus aureus (MRSA) Colonization.
65. Multifunctional 3D-Printed Wound Dressings Containing a Combination of Synergistic Antimicrobials in the Management of MRSA Infected Topical Wounds.
66. Adverse Events and Immune Response in Psoriasis Patients Receiving Interleukin-17 Inhibitors.
67. Bacterial Isolates From Orthopedic Posttraumatic Surgical Infections in Northern Ghana: ESβL Detection and Analysis of Antimicrobial Resistance Trends.
68. Isolation, identification and comparative genomic analysis of Lactobacillus salivarius from Mongolian horse vagina.
69. IVC filter migration causing discitis, psoas abscess and hydronephrosis: improving IVC filter retrieval rates.
70. Epidemiology and risk factors of Methicillin-Resistant Staphylococcus aureus (MRSA) infections in a tertiary care hospital in Saudi Arabia: An 8-year retrospective analysis.
71. Superstretchable and Tough Physical Cross-Linking Hydrogels with Dual pH and Temperature Responsiveness for In Vivo Treatment of Staphylococcus aureus-Infected Wounds.
72. Silver Nanoparticles and Houttuynin Sodium-Based Fibrous Poly(L-lactide-co-glycolide)/Gelatin-Based Dressings for Infectious Wound Healing.
73. Preclinical evaluation of a novel antibiotic-eluting BioEnvelope for CIED infection prevention.
74. Clinical Practice of Surgical Treatment for Left-Sided Infective Endocarditis: Nationwide Data from the NIDUS Registry.
75. A Study of Expert Perspectives on the Administration of Cefpodoxime and its Combinations in Respiratory Infections: PERCEPT Survey.
76. Laminaria tent use for dilation, extraction, and curettage leading to septic shock: a case report.
77. Methicillin-Resistant Staphylococcus aureus Infection to a Stent Graft in the Superficial Femoral Artery.
78. What is the viable microbiome of the healthcare toilet?
79. Flavonols interrupt internalized bacteria hijacking cellular responses via suppressing oxidative stress induced cellular apoptotic death.
80. Enhanced barrier precautions to prevent transmission of Staphylococcus aureus and Carbapenem-resistant organisms in nursing home chronic ventilator units.
81. Biofilm formation and role of other pathogenic factors in the virulence of Staphylococcus epidermidis clinical isolates.

Guidelines / Prevention Practice

1. Acceptability of Proposed Stewardship Interventions to Reduce Preoperative Screening and Treatment of Asymptomatic Bacteriuria.
2. Epidemiology of resistant bacterial infections in patients with hematological malignances or undergoing hematopoietic cell transplantation in Europe: a systematic review by the European Conference on Infections in Leukemia (ECIL).
3. Association of Prophylactic Antibiotic Guideline Non-Adherence with Surgical Site Infections in Patients Receiving Perioperative Vancomycin: Results from a Multi-Institutional Combined NSQIP and MPOG Registry.

Breast Surgery

1. [The cost of complications in surgical tourism: Our experience, a 6-year retrospective study].
2. Tissue Expander Salvage After Postoperative Infection Depending on Plane of Placement in Breast Reconstruction.
3. Defining Lifetime Risk Thresholds for Breast Cancer Surgical Prevention.
4. Non-Tobacco Nicotine Dependence Is Associated With Increased Early Postoperative Complications Following Reduction Mammaplasty.
5. The influence of cardiovascular disease on duration of admission after DIEP flap breast reconstruction: A retrospective cohort study.
6. [Preoperative antibiotic prophylaxis and breast reduction surgery: A call for new recommendations].
7. Fourth nationwide surveillance of the antimicrobial susceptibility patterns of pathogens isolated from surgical site infections in Japan.
8. Achieving Textbook Outcomes in Bilateral DIEP Flap Breast Reconstruction: Does a Co-Surgeon Matter?
9. Efficacy of using pentoxifylline in patients undergoing breast cancer surgery.
10. Comparative outcomes of human acellular dermal matrices in breast reconstruction: a systematic review and meta-analysis framework.
11. A Clinical Prediction Model in Prognosticating Salvage of the Infected Implant in Alloplastic Breast Reconstruction.
12. Evaluation of Major Complications Following Ruptured Implant Removal: A National Surgery Quality Improvement Program Database Analysis.
13. Recent Antibiotic Use and Surgical Site Infections in Tissue Expander-Based Breast Reconstruction: A Propensity Score-Matched Analysis.
14. Evaluation of Pre-Pectoral Direct-to-Implant Breast Reconstruction with Post-Mastectomy Radiation: A Systematic Review and Meta-Analysis.
15. Breast Cancer Hormone Therapy Modulates Breast Implant Capsular Contracture.
16. Necrotizing Soft Tissue Infection of the Breast: A Unique Presentation of Underlying Invasive Breast Cancer.
17. Prepectoral Breast Reconstruction: Early and Long-term Complications and Outcomes of Total Coverage ADM and Implants vs Polyurethane-Coated Implants Without Use of Acellular Dermal Matrix.
18. Systematic Review of Complication Rates of Gender-affirming Breast Augmentation and Its Closest Analogue: Tuberous Breast Augmentation.
19. Do disease-modifying anti-rheumatic drugs affect implant-based breast reconstruction outcomes in patients with autoimmune connective tissue disease?
20. The effect of sarcopenia on postoperative complications in autologous breast reconstruction: A systematic review and meta-analysis.
21. Bacterial Synergism in Breast Necrotizing Fasciitis: A Case Report on Diagnostic Dilemmas, Therapeutic Challenges, and Reconstructive Management.
22. The Impact of Body Mass Index on Safety and Efficacy of Endoscopic Radical Thyroidectomy via Gasless Unilateral Axillary Approach for Thyroid Cancer Patients.
23. SPARC Induces COL1A1/COL3A1 Expressions Representing Aggressive Molecular Cancer-Associated Fibroblasts Signatures and CSF1-Mediated Cancer Invasion in Colorectal Cancer.
24. Complicated Extra-Abdominal Desmoid Tumor Associated With Pregnancy in a Patient With a History of Bilateral Mastectomy: A Case Report.

Mupirocin resistance

1. Emergence of ST3390: A novel apigmented MRSA clone from the CC5 Lineage.

Competitors

1. Staphylococcus aureus: a model for bacterial cell biology and pathogenesis.
2. Evaluation of Streptococcus pneumoniae as a cause of acute otitis media in Colombia: A prospective study.
3. Development of a bivalent protein subunit vaccine against infection by Pseudomonas aeruginosa and Staphylococcus aureus.
4. Probiotic peptidoglycan skeleton enhances vaccine efficacy against MRSA by inducing trained immunity via the TLR2/JAK-STAT3 pathway.
5. Evolution of strain diversity and virulence factor repertoire in pediatric Staphylococcus aureus isolates.
6. A promising Staphylococcus aureus vaccine adjuvant candidate to overcome Staphylococcal infection based on innate immunity.
7. Porous hydrogel of siloxane-modified polyvinyl alcohol/polydopamine containing berberine chloride, exhibiting robust antibacterial activity and promoting the healing of MRSA-infected wounds.
8. Orbital Cellulitis Management in Pediatric and Adult Cohorts: A 12-Year Retrospective Analysis From a Tertiary Center.
9. Staphylococcus Strains in Atopic Dermatitis in Children: Toxins Production and Resistance Properties.
10. Mass Spectrometry-Based Analysis of Surface Proteins in Staphylococcus aureus Clinical Strains: Identification of Promising k-mer Targets for Diagnostics.
11. Is Positive Airway Pressure Lab-Titration Always Necessary to Start Noninvasive Respiratory Support in Infants?
12. Identification of a novel ltaS mutation in daptomycin heteroresistant community-acquired methicillin-resistant Staphylococcus aureus ST72 strains in South Korea.
13. Nomenclature, definitions, and methodological approaches to estimate the association between antimicrobial treatment and clinical outcomes of drug-resistant bloodstream infections.
14. Dalbavancin for Treatment of Staphylococcus aureus Bacteremia: The DOTS Randomized Clinical Trial.
15. A Case of Pyogenic Vertebral Osteomyelitis and Iliopsoas Abscess Caused by Invasive Pneumococcal Disease Serotype 35F: Utility of Diffusion-Weighted Whole-Body Imaging With Background Body Signal Suppression as an Adjunctive Diagnostic Tool.
16. Prescription Trends by Orthopedic Surgery Provider: Review of the Medicare Part D Prescribers - by Provider and Drug, 2013-2021.
17. Amino Acid Substitutions in Bacteriocin Lactolisterin BU Reveal Functional Domains Involved in Biological Activity Against Staphylococcus aureus.
18. Dual-functionality of Nocardiopsis alba B57 in biocontrol and plant growth: a metabolomic approach to agricultural sustainability.
19. Research priorities in Infection Prevention and Control in Alberta, Canada: a modified Delphi process.
20. Synthesis, Conformal Analysis, and Antibody Binding of Staphylococcus aureus Capsular Polysaccharide Type 5 Oligosaccharides.
21. Epidemiology and surveillance of influenza, RSV and SARS-CoV-2 in children admitted with severe acute respiratory infection in West bengal, India from 2022 to 2023.
22. An epitope vaccine derived by analyzing clinical trial samples safeguards hosts with prior exposure to S. aureus against reinfection.
23. Reduced efficacy of an anti-toxin vaccine from senescence-driven attenuation of toxin virulence.
24. Respiratory pathogens in infants and young children with acute respiratory illness: a prospective cohort study, China, 2023-2024.
25. Secular trends of bloodstream infections in hemodialysis patients: insights from a longitudinal Swiss study.