**XF-73 Nasal Literature Review**

**Period: 06/10/2023 – 06/10/2023**

[Scientific Highlights 1](#_Toc147398408)

[SA Decolonisation 1](#_Toc147398409)

[SA/MRSA Colonisation / Infection 1](#_Toc147398410)

[Guidelines / Prevention Practice 1](#_Toc147398411)

[Breast Surgery 2](#_Toc147398412)

[Mupirocin resistance 2](#_Toc147398413)

[Competitors 2](#_Toc147398414)

[Economic News 2](#_Toc147398415)

[Covid-19 2](#_Toc147398416)

[Other news of possible interest 2](#_Toc147398417)

Scientific Highlights

1. Impact of control measures including decolonization and hand hygiene for orthopaedic surgical site infection caused by MRSA at a Japanese tertiary-care hospital.
2. Implementation of a Prevention Bundle to Decrease Rates of Staphylococcus aureus Surgical Site Infection at 11 Veterans Affairs Hospitals.
3. Recent updates in the development of molecular assays for the rapid identification and susceptibility testing of MRSA.
4. Hiding in Plain Sight: Benefit of Abrasion and Laceration Swabs in Identification of Panton-Valentine Leucocidin (PVL)-Meticillin Resistant Staphylococcus aureus (MRSA) Colonisation in Military Personnel.
5. Chronicity of high and low level mupirocin resistance in Staphylococcus aureus from 30 Indian hospitals.
6. Limited Adaptation of Staphylococcus aureus during Transition from Colonization to Invasive Infection.
7. Effective screening methods to prevent surgical site infections in orthopedic surgery: an observational study.
8. Efficacy and safety of Melaleuca alternifolia (tea tree) oil for human health-A systematic review of randomized controlled trials.
9. Nasal microbiota profiles in shelter dogs with dermatological conditions carrying methicillin-resistant and methicillin-sensitive Staphylococcus species.
10. Methicillin resistance Staphylococcus aureus nasal carriage and its associated factors among HIV patients attending art clinic at Dessie comprehensive specialized hospital, Dessie, North East Ethiopia.
11. Quality improvement study on the effectiveness of intranasal povidone-iodine decolonization on surgery patients.
12. Positive Preoperative Colonization With Methicillin Resistant Staphylococcus Aureus Is Associated With Inferior Postoperative Outcomes in Patients Undergoing Total Joint Arthroplasty.
13. [Translated article] Results of a preoperative screening and decolonization programme for Staphylococcus aureus in primary hip and knee arthroplasty.
14. Methicillin-resistant Staphylococcus aureus nasal carriage among patients on haemodialysis with newly inserted central venous catheters.
15. Association between nasal colonization of Staphylococcus aureus and surgical site infections in spinal surgery patients: a systematic review and meta-analysis.
16. Effects of preoperative Staphylococcus aureus screening and targeted decolonization bundle protocols in cardiac surgery: a nine-year review of a regional cardiovascular center in China.
17. Probiotic for pathogen-specific Staphylococcus aureus decolonisation in Thailand: a phase 2, double-blind, randomised, placebo-controlled trial.
18. Effect of nasal mupirocin treatment on extranasal carriage of methicillin-resistant Staphylococcus aureus among pediatric patients admitted to the neonatal intensive care unit.
19. Dissemination of Methicillin-Resistant Staphylococcus aureus Sequence Type 764 Isolates with Mupirocin Resistance in China.
20. The efficacy of multifaceted versus single anesthesia work area infection control measures and the importance of surgical site infection follow-up duration.

SA Decolonisation

1. Association between methicillin-resistant Staphylococcus aureus nasal carriage and infection after pancreatic surgery.
2. The examination of some virulence factors in S. aureus isolates obtained from the healthy human population, sheep mastitis, and cheese.
3. Factors Associated with Otitis Media Among Pediatrics in Two Government Hospitals in Arba Minch, Southern Ethiopia.
4. Chlorhexidine-Silver Nanoparticle Conjugation Leading to Antimicrobial Synergism but Enhanced Cytotoxicity.
5. First Report of Food Poisoning Due to Staphylococcal Enterotoxin Type B in DÃ¶ner Kebab (Italy).
6. Prospective Evaluation of the BD MAX StaphSR Assay for the Screening of Methicillin-Susceptible and -Resistant Staphylococcus aureus from Nasal Swabs Taken in Intensive Care Unit Patients.
7. Surveillance of Multidrug-Resistant Pathogens in Neonatal Intensive Care Units of Palermo, Italy, during SARS-CoV-2 Pandemic.
8. Financial Analysis of Preoperative Nasal Decolonization with Povidone-Iodine in Closed Pilon Fracture Definitive Fixation.
9. Phages for treatment of Staphylococcus aureus infection.
10. Which are the best murine models to study Eosinophilic Chronic Rhinosinusitis? A contemporary review.
11. Toxin exposure and HLA alleles determine serum antibody binding to toxic shock syndrome toxin 1 (TSST-1) of Staphylococcus aureus.
12. High Frequency of Methicillin-Resistant and Multidrug-Resistant Strains of Staphylococcus aureus Colonizing Students in Okada, Edo State, Nigeria.
13. Chemerin and IL-17 are potential predictors and Chemerin silencing alleviates inflammatory response and bone remodeling in chronic rhinosinusitis.
14. Discrepancies between phenotypic and genotypic identification methods of antibiotic resistant genes harboring Staphylococcusaureus.
15. Impact of the sequential implementation of a pharmacy-driven methicillin-resistant Staphylococcus aureus (MRSA) nasal-swab ordering policy and vancomycin 72-hour restriction protocol on standardized antibiotic administration ratio (SAAR) data for antibiotics used for resistant gram-positive infections.
16. Role of nuc gene in Staphylococcus aureus to phagocytic activity in different cattle infections.
17. The Impact of Nasal Staphylococcus aureus Carriage on Surgical-Site Infections after Immediate Breast Reconstruction: Risk Factors and Biofilm Formation Potential.
18. Presence and Resistance Profile of Staphylococcus spp. Isolated from Slaughtered Pigs.
19. Using Methicillin-Resistant Staphylococcus aureus Nasal Screens to Rule Out Methicillin-Resistant S aureus Pneumonia in Surgical Intensive Care Units.
20. [Analysis of nasal microbial characteristics in patients with allergic rhinitis and non-allergic rhinitis].

SA/MRSA Colonisation / Infection

1. The Clinical and Economic Burden of Antibiotic Use in Pediatric Patients with Varicella Infection: a Retrospective Cohort Analysis of Real-World Data in England.
2. Bilateral gluteal reconstruction with deep inferior epigastric perforator flaps and saphenofemoral arteriovenous loops.
3. Outcome of hip resurfacing revision through the Hueter-anterior approach.
4. Nondental Invasive Procedures and Risk of Infective Endocarditis: Time for a Revisit: A Science Advisory From the American Heart Association.
5. Effect of operative time in outcomes following surgical fixation of hip fractures: a multivariable regression analysis of 35,710 patients.
6. TLR7 promotes chronic airway disease in RSV-infected mice.
7. Self-Care Behaviour of Patients With Breast Cancer in the Management of Side Effects of Chemotherapy.
8. Colonization of extended-spectrum Î²-lactamase-producing Enterobacteriaceae does not affect subsequent infection and liver transplant outcomes: a retrospective observational cohort study.
9. A Pilot Study of Mitochondrial Response to an In Vivo Prosthetic Joint Staphylococcus aureus Infection Model.
10. What we learned from steroid therapy in the COVID-19 pandemic.
11. Open prostatectomy for benign prostatic hyperplasia: A critical analysis of patient presentation and surgical outcomes in a contemporary series.
12. Quantification and comparison of salivary neutrophils in periodontal health and disease.
13. Outcomes of early fiberoptic bronchoscopic sputum aspiration and lavage after thoracoscopic and laparoscopic esophageal cancer surgery: a randomized clinical trial.
14. Comparison of central venous catheter thoracic drainage and traditional closed thoracic drainage following minimally invasive surgery for esophageal carcinoma: a retrospective analysis.
15. Comparison of two surgical interventions for lumbar brucella spondylitis in adults: a retrospective analysis.
16. Radical debridement guided by advanced imaging and frequent monitoring is an effective approach for the treatment of odontogenic abscesses and jaw osteomyelitis in rabbits: a review of 200 cases (2018-2023).
17. Medieval (arrow) weapon injuries in contemporary surgical practice: Impaled posterior thoracic wall arrowhead leading to haemo-thorax: Management protocols. Case report.
18. Minimally invasive tubular microdiscectomy for recurrent lumbar disc herniation: step-by-step technical description with safe scar dissection.
19. The Impact of Helicobacter pylori on Laparoscopic Sleeve Gastrectomy Postoperative Complications: a Systematic Review and Meta-analysis.
20. Minimally Invasive SI Joint Fusion Procedures for Chronic SI Joint Pain: Systematic Review and Meta-Analysis of Safety and Efficacy.
21. The Association of Intraoperative and Early Postoperative Events with Risk of Pneumonia Following Cardiac Surgery.
22. Differentiating Spinal Pathologies by Deep Learning Approach.
23. Mollicutes-related infections in thoracic surgery including lung and heart transplantation: a systematic review.
24. Risk factors for postoperative infection after bilateral sagittal split ramus osteotomy: A retrospective analysis.
25. Meta-analysis of Efficacy of Perioperative Oral Antibiotics in Intestinal Surgery with Surgical Site Infection.
26. Retrocaval ureter in a child presenting at a regional referral hospital in South-Western Uganda: A case report.
27. Pull-Through for Hirschsprung's Disease: Insights for Limited-Resource Settings From Mbarara.
28. Validation of measures for perioperative urinary catheter use, urinary retention, and urinary catheter-related trauma in surgical patients.
29. Outcomes of Surgically Treated Pilon Fractures: A Comparison of Patients with and without Diabetes.
30. Use of Ozonized Water in the Prevention of Surgical Site Infection in Children Undergoing Cardiovascular Surgery.
31. Deep Infection After Anterior Cruciate Ligament Reconstruction Diagnosed by Intratunnel Suspensory Fixation Device Migration: A Case Report.

Guidelines / Prevention Practice

1. Impact of 30-day prescribed opioid dose trajectory on fatal overdose risk: A population-based, statewide cohort study.
2. Optimal selection of daily satellite precipitation product based on structural similarity index at 1Â km resolution for the Pra catchment, Ghana.
3. The pharmacokinetics and pharmacodynamics of continuous infusion vancomycin in adult people with cystic fibrosis.
4. Monkeypox scenario in India: a review study.
5. Tetanus, Diphtheria, and Acellular Pertussis Vaccination Coverage Among Publicly Insured Pregnant Women, U.S., 2016-2019.
6. Urinary tract infection in the context of mini-invasive procedures after kidney transplantation.
7. Opioid prescription rates associated with surgery among adolescents in the United States from 2015 to 2020.
8. The elimination of hepatitis D as a public health problem: Needs and challenges.
9. Congenital Retrosigmoid Cholesteatoma: Case Series and Literature Review.
10. Effectiveness of piperonyl butoxide and pyrethroid-treated long-lasting insecticidal nets (LLINs) versus pyrethroid-only LLINs with and without indoor residual spray against malaria infection: third year results of a cluster, randomised controlled, two-by-two factorial design trial in Tanzania.
11. Outcomes of Early versus Standard Closure of Diverting Ileostomy after Proctectomy: Meta-analysis and Meta-regression Analysis of Randomized Controlled Trials.
12. Invasive pneumococcal disease and potential impact of pneumococcal conjugate vaccines among adults, including persons experiencing homelessness - Alaska, 2011-2020.
13. Serologic Immunity to Tetanus in the United States, National Health and Nutrition Examination Survey, 2015-2016.
14. Management of soft tissues in patients with periprosthetic joint infection.
15. Comparison of bacterial culture with BioFireÂ® FilmArrayÂ® multiplex PCR screening of archived cerebrospinal fluid specimens from children with suspected bacterial meningitis in Nigeria.
16. Cloxacillin plus fosfomycin versus cloxacillin alone for methicillin-susceptible Staphylococcusâ€‰aureus bacteremia: a randomized trial.
17. Endoscopic treatment of primary obstructive megaureter with high pressure balloon dilation in infants.
18. Improving fragility hip fracture care through data: a multicentre experience from a country with an emerging economy during the COVID-19 pandemic.
19. Peripheral and Placental Prevalence of Sulfadoxine-Pyrimethamine Resistance Markers in Plasmodium falciparum among Pregnant Women in Southern Province, Rwanda.
20. Low body mass index patients have worse outcomes after mechanical thrombectomy.
21. National variation in prophylactic antibiotic use for elective primary total joint replacement.
22. Disease Severity of Respiratory Syncytial Virus Compared with COVID-19 and Influenza Among Hospitalized Adults Aged â‰¥60 Years - IVY Network, 20 U.S. States, February 2022-May 2023.
23. Characteristics and Outcomes Among Adults Aged â‰¥60 Years Hospitalized with Laboratory-Confirmed Respiratory Syncytial Virus - RSV-NET, 12 States, July 2022-June 2023.

Breast Surgery

1. A Rare Complication Following Breast Conserving Surgery: Pyoderma Gangrenosum.
2. Outcomes of Vacuum-Assisted Beast Biopsy for Management of Benign Breast Masses.
3. A prospective randomized clinical trial to assess antibiotic pocket irrigation on tissue expander breast reconstruction.
4. Expander prosthesis and DIEP flaps in delayed breast reconstruction: Sensibility, patient-reported outcome, and complications in a five-year randomised follow-up study.
5. Antiseptic Techniques in Breast Implant Surgery: Insights From Plastic Surgeons in Saudi Arabia.
6. Case report: Preliminary study on the diagnosis and treatment of respiratory distress in patients with giant nodular goiter complicated with severe COVID-19.
7. Inpatient versus Outpatient Immediate Alloplastic Breast Reconstruction: Recent Trends, Outcomes, and Safety.
8. Extended arc of rotation of Latissimus Dorsi Musculocutaneous Flap providing well-vascularized tissue for reconstruction of complete defects of the sternum: An anatomical study of flap pedicle modification.
9. Treatment of Complications After Minimally Invasive Breast Augmentation with Aquafilling Gel.
10. Lasting Impacts of the COVID-19 Pandemic on Breast Cancer Diagnosis and Treatment in the United States.
11. Implications of the COVID-19 Pandemic on Immediate Breast Reconstruction Access.
12. Comorbid Conditions and Complications in Body Contouring Surgery: A Retrospective Review.
13. Breast Reconstruction with Simultaneous Bilateral Lumbar Artery Perforator Flaps Improves Waistline Definition and Buttock Projection.
14. Smooth vs Textured Expanders: Patient Factors and Anatomic Plane are Greater Factors in Determining First-Stage Breast Reconstruction Outcomes.
15. Analysis of Complications in Patients With a History of Cannabis Use and Tobacco Use Undergoing Implant-Based Breast Reconstruction.
16. Region-specific protection effect of preoperative oral antibiotics combined with mechanical bowel preparation before laparoscopic colorectal resection: a prospective randomized controlled trial.
17. Nipple-Sparing Mastectomies in Patients over the Age of 60 Years: Factors Associated with Surgical Outcomes.
18. Infective Endocarditis: Controversies and Convictions in the Surgical Treatment.
19. Early experience of direct-to-implant breast reconstruction using acellular dermal matrix after robot-assisted nipple-sparing mastectomy.

Mupirocin resistance

1. Antiseptics and mupirocin resistance in clinical, environmental, and colonizing coagulase negative Staphylococcus isolates.
2. Prevalence and Characterization of Staphylococcus aureus Isolated from Retail Raw Milk Samples in Chennai, India.
3. Genetic diversity of Staphylococcus aureus isolated from ear infections in Iran: Emergence of CC8/ST239-SCCmec III as major genotype.
4. Antibiotic hyper-resistance in a class I aminoacyl-tRNA synthetase with altered active site signature motif.
5. Identification of Vancomycin Resistance in Methicillin-resistant Staphylococcus aureus in two macaque species and decolonization and long-term prevention of recolonization in Cynomolgus Macaques (Macaca fascicularis).
6. Comparison of Disk Diffusion and Agar Dilution Method for the Detection of Mupirocin Resistance in Staphylococcal Isolates from Skin and Soft Tissue Infections.
7. Impact of Bundled Intervention on Outcomes of Patients Undergoing Clean Orthopedic Surgeries With Hardware Implants: Small Prospective Randomized Controlled Trial.
8. Efficacy of a Novel Antibacterial Agent Exeporfinium Chloride, (XF-73), Against Antibiotic-Resistant Bacteria in Mouse Superficial Skin Infection Models.
9. Antibiotic susceptibility and clonal distribution of Staphylococcus aureus from pediatric skin and soft tissue infections: 10-year trends in multicenter investigation in China.
10. Antimicrobial resistome of coagulase-negative staphylococci from nasotracheal cavities of nestlings of Ciconia ciconia in Southern Spain: Detection of mecC-SCCmecÂ type-XI-carrying S. lentus.
11. Associated Outcomes of Different Intravenous Antibiotics Combined with 2% Mupirocin Ointment in the Treatment of Pediatric Patients with Staphylococcal Scalded Skin Syndrome.
12. Persistence of the Staphylococcus aureus epidemic European fusidic acid-resistant impetigo clone (EEFIC) in Belgium.
13. Baseline prevalence of antimicrobial resistance in patients who develop a surgical site infection in hip and knee replacements: A brief report.
14. Electrospun polyvinyl alcohol-chitosan dressing stimulates infected diabetic wound healing with combined reactive oxygen species scavenging and antibacterial abilities.
15. Harnessing the Dual Antimicrobial Mechanism of Action with Fe(8-Hydroxyquinoline)(3) to Develop a Topical Ointment for Mupirocin-Resistant MRSA Infections.
16. Antimicrobial profile of coagulase-negative staphylococcus isolates from categories of individuals at a neonatal intensive care unit of a tertiary hospital, Ghana.
17. Markers of epidemiological success of methicillin-resistant Staphylococcus aureus isolates in European populations.
18. A novel sacral neuromodulation protocol is associated with reduction in removal for device infection.
19. Exploiting Broad-Spectrum Chimeric Lysin to Cooperate with Mupirocin against Staphylococcus aureus-Induced Skin Infections and Delay the Development of Mupirocin Resistance.

Competitors

1. A protein-free vaccine stimulates innate immunity and protects against nosocomial pathogens.
2. Lupus Erythematosus Profundus with Multiple Overlying Cutaneous Ulcerations: A Rare Case.
3. Monoclonal antibodies neutralizing alpha-hemolysin, bicomponent leukocidins, and clumping factor A protected against Staphylococcus aureus-induced acute circulatory failure in a mechanically ventilated rabbit model of hyperdynamic septic shock.
4. Impact of vaccines on Staphylococcus aureus colonization: A systematic review and meta-analysis.
5. Invasive bacterial disease in young infants in rural Gambia: Population-based surveillance.
6. Structure and Function of theÂ Î±-Hydroxylation Bimodule of the Mupirocin Polyketide Synthase.
7. Invasive Bacterial Infections in Children With Sickle Cell Disease: 2014-2019.
8. "You Sleep, You Die": A Rare Clinical Case of Ondine's Curse after Posterior Fossa Surgery.
9. The burden of antimicrobial resistance in the Americas in 2019: a cross-country systematic analysis.
10. Immunoproteomic analysis of the serum IgG response to cell wall-associated proteins of Staphylococcus aureus strains belonging to CC97 and CC151.
11. Guideline for allergological diagnosis of drug hypersensitivity reactions: S2k Guideline of the German Society for Allergology and Clinical Immunology (DGAKI) in cooperation with the German Dermatological Society (DDG), the Association of German Allergologists (Ã„DA), the German Society for Pediatric Allergology (GPA), the German Contact Dermatitis Research Group (DKG), the German Society for Pneumology (DGP), the German Society of Otorhinolaryngology, Head and Neck Surgery, the Austrian Society of Allergology and Immunology (Ã–GAI), the Austrian Society of Dermatology and Venereology (Ã–GDV), the German Academy of Allergology and Environmental Medicine (DAAU), and the German Documentation Center for Severe Skin Reactions (dZh).
12. Topical antibiotics prophylaxis for infections of indwelling pleural/peritoneal catheters (TAP-IPC): A pilot study.
13. Designing a novel chimeric multi-epitope vaccine subunit against Staphylococcus argenteus through artificial intelligence approach integrating pan-genome analysis, inÂ vitro identification, and immunogenicity profiling.
14. Formulation and Characterization of Mupirocin Nanomicelles in Insulin-Based Gel for Dermatological Application.
15. Incidence, associated burden of disease, and healthcare utilisation of prosthetic joint infections due to Staphylococcus aureus in European hospitals. The COMBACTE-NET ARTHR-IS multicentre study.

Economic News

Covid-19

1. Whole genome sequence-based characterization of virulence and antimicrobial resistance gene profiles of Staphylococcus aureus isolated from food poisoning incidents in eastern China.
2. Enhancing the Ag-loading capacity on Ti(3)C(2)T(x) sheets as hybrid fillers to form composite coatings with excellent antibacterial properties.
3. Past-expiration-date liquid disinfectants to deactivate biological and chemical toxins on building material surfaces.
4. Genome-wide CRISPR screens and their applications in infectious disease.
5. Effect of antibiotic prophylaxis in the prognosis of Post-neurosurgical meningitis patients.
6. Insight into the 4-nitrophenol reduction, supercapacitive behavior, and antimicrobial activity of ZnCo(2)O(4)-rGO nanocomposite fabricated by the simple reflux method.
7. Mercuric-sulphide based metallopharmaceutical formulation as an alternative therapeutic to combat viral and multidrug-resistant (MDR) bacterial infections.
8. Optimization and bio-fabrication of phyto-mediated silver nanoparticles (Ag-NPs) for antibacterial potential.
9. Anti-lung Cancer, Anti-microbial, Anti-Î±-glucosidase, Anti-sorbitol Dehydrogenase, and in silico Studies of Wogonoside and Isoliquiritigenin as Natural Compounds.
10. A comparative analysis of quantitative detection methods for viable food-borne pathogens using RT-qPCR and PMA-qPCR.
11. Antisense yycF and BMP-2 co-delivery gelatin methacryloyl and carboxymethyl chitosan hydrogel composite for infective bone defects regeneration.
12. TiO(2) loaded on glycidol functionalized poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) nanobiocomposite film for photocatalytic and antibacterial activities.
13. Staphylococcus aureus adapts to the immunometabolite itaconic acid by inducing acid and oxidative stress responses including S-bacillithiolations and S-itaconations.
14. Assessment and prediction of hexavalent chromium vulnerability in groundwater by Geochemical modelling, NOBLES Index and Random Forest Model.
15. Dual Surgical Setup Associated with Reduced Infection Recurrence for Hip and Knee Arthroplasty After Two-Stage Exchange.
16. The effect and mechanism of iodophors on the adhesion and virulence of Staphylococcus aureus biofilms attached to artificial joint materials.
17. Bacterial contamination of healthcare workers' mobile phones in Africa: a systematic review and meta-analysis.
18. Agarose fibers with glycerol and graphene oxide and functional properties for potential application in biomaterials.
19. Porphyrin-based covalent organic polymers with customizable photoresponses for photodynamic inactivation of bacteria.
20. An experimental setup and segmentation method for CFU counting on agar plate for the assessment of drinking water.
21. Targeting Dalbavancin Inoculum Effect: Adjunctive Single Dose of Daptomycin.
22. Analysis of Antibacterial Efficacy and Cellular Alignment Regulation on Plasma Nanotextured Chitosan Surfaces.
23. Preparation and Application of High-Efficiency, Antibacterial, and Antiviral PET-PTHP Fibers.
24. Gold Nanoparticles Capped with a Novel Titanium(IV)-Containing Polyoxomolybdate Cluster: Selective and Enhanced Bactericidal Effect Against Escherichia coli.
25. Echinacoside, a promising sortase A inhibitor, combined with vancomycin against murine models of MRSA-induced pneumonia.
26. Clinical Staphylococcus aureus inhibits human T-cell activity through interaction with the PD-1 receptor.
27. Executive Summary: Periprosthetic Joint Infection-Current Clinical Challenges.
28. Staphylococcus aureus delta toxin modulates both extracellular membrane vesicle biogenesis and amyloid formation.

Other news of possible interest