**M3 Literature Review**

**Period: 08/04/2024 – 08/05/2024**

[Scientific Highlights: 1](#_Toc143520007)

[Clostridioides difficile/ Clostridium difficile 3](#_Toc143520008)

[Fidaxomicin & Clostridium difficile 4](#_Toc143520009)

[Clostridioides difficile vaccine 4](#_Toc143520010)

[Vancomycin & CDI 4](#_Toc143520011)

[CDI 4](#_Toc143520012)

[FMT/ Fecal Microbiota Transplant 5](#_Toc143520013)

[Competitors 5](#_Toc143520014)

[CDAD 6](#_Toc143520015)

[CMC 6](#_Toc143520016)

[Guidelines 6](#_Toc143520017)

[Non-toxigenic C. difficile 6](#_Toc143520018)

[MGB 6](#_Toc143520019)

[Other news of possible interest 7](#_Toc143520020)

Scientific Highlights:

1. Microbiota-Based Therapeutics as New Standard-of-Care Treatment for Recurrent Clostridioides difficile Infection.
2. Advances in Therapeutic Strategies for the Management of Clostridioides difficile Infection.
3. The use of faecal microbiota transplant as treatment for recurrent or refractory Clostridioides difficile infection and other potential indications: second edition of joint British Society of Gastroenterology (BSG) and Healthcare Infection Society (HIS) guidelines.
4. The use of faecal microbiota transplant as treatment for recurrent or refractory Clostridioides difficile infection and other potential indications: second edition of joint British Society of Gastroenterology (BSG) and Healthcare Infection Society (HIS) guidelines.
5. Post-infectious ibs following Clostridioides difficile infection; role of microbiota and implications for treatment.
6. Reduction of product composition variability using pooled microbiome ecosystem therapy and consequence in two infectious murine models.
7. Case Series: Efficacy of Polyclonal Intravenous Immunoglobulin for Refractory Clostridioides difficile Infection.
8. Management and Outcomes of Patients at a Specialty Clinic for Clostridioides difficile Infection.
9. Is shorter also better in the treatment of Clostridioides difficile infection?
10. Machine Learning-based Prediction Models for C difficile Infection: A Systematic Review.
11. Derotational distal femur osteotomy with medial patellofemoral ligament reconstruction can get good outcomes in the treatment of recurrent patellar dislocation with excessive TT-TG and increased femoral anteversion.
12. Clostridiodes difficile infection in inflammatory bowel disease: a clinical review.
13. Fecal microbiota transplantation for recurrent C. difficile infection can be the best therapeutic option in severely immunocompromised patients depending on a case-by-case assessment of the benefit/risk ratio.
14. Donor screening for fecal microbiota transplantation with a direct stool testing-based strategy: a prospective cohort study.
15. Clostridioides difficile Colitis.
16. Appendectomy versus antibiotic treatment for acute appendicitis.
17. Clostridioides difficile infection is associated with differences in transcriptionally active microbial communities.
18. Correction to: A review of fecal microbiota, live-jslm for the prevention of recurrent Clostridioides difficile infection.
19. Clostridioides difficile infection, recurrence and the associated healthcare consumption in Sweden between 2006 and 2019: a population-based cohort study.
20. Revealing roles of S-layer protein (SlpA) in Clostridioides difficile pathogenicity by generating the first slpA gene deletion mutant.
21. A Retrospective Budget Impact Analysis of Fidaxomicin Treatment for Clostridioides difficile Infections (CDI) in Germany.

Clostridioides difficile/ Clostridium difficile

1. Correlation of retrobulbar perfusion deficits with glaucomatous visual field defects.
2. Depressive symptoms in early adolescence: the dynamic interplay between emotion regulation and affective flexibility.
3. Atomic structures of a bacteriocin targeting Gram-positive bacteria.
4. Australian Gonococcal Surveillance Programme, 1 July to 30 September 2023.
5. Australian Gonococcal Surveillance Programme, 1 April to 30 June 2023.
6. Australian Gonococcal Surveillance Programme, 1 January to 31 March 2023.
7. COVID-19 Australia: Epidemiology Report 82: Reporting period ending 17 December 2023.
8. COVID-19 Australia: Epidemiology Report 81: Reporting period ending 19 November 2023.
9. A severe case of swimmer's itch in Victoria, Australia with bullous eruption.
10. The first confirmed outbreak of chikungunya reported in Timor-Leste, 2024.
11. A brief description of the epidemiology of dengue in Dili, Timor-Leste, 2018-2022.
12. COVID-19 Australia: Epidemiology Report 83: Reporting period ending 14 January 2024.
13. Validity and reliability of the Difficulties in Emotion Regulation Scale Short Form in Indonesian non-clinical population.
14. Effects of Achieving Rapid, Intensive, and Sustained Blood Pressure Reduction in Intracerebral Hemorrhage Expansion and Functional Outcome.
15. Increased threat of urban arboviral diseases from Aedes aegypti mosquitoes in Colombia.
16. Investigation and response to an outbreak of Neisseria meningitidis serogroup Y ST-1466 urogenital infections, Australia.
17. How to Succeed as a Radiology Fellow.
18. A qualitative study of leaders' experiences of handling challenges and changes induced by the COVID-19 pandemic in rural nursing homes and homecare services.
19. Polyethylene glycol-polyvinylidene fluoride/TiO(2) nanocomposite polymer coatings with efficient antifouling strategies: Hydrophilized defensive surface and stable capacitive deionization.
20. The Effects of Encapsulation on the In Vitro Anti-Clostridial Activity of Olive Mill Wastewater Polyphenolic Extracts: A Promising Strategy to Limit Microbial Growth in Food Systems.
21. Effects of supplementing direct-fed microbials on health and growth of pre-weaning Gyr × Holstein dairy calves.
22. Clinical outcomes of clostridioides difficile infection in the very elderly.
23. C. difficile biomarkers, pathogenicity and detection.
24. The incidence of Clostridium difficile infection in children with and without inflammatory bowel diseases: A single-center study in Taiwan from 2006 to 2019.
25. Gut microbiome changes in mouse, Mongolian gerbil, and hamster models following Clostridioides difficile challenge.
26. A retrospective chart review assessing antibiotic treatment of hospitalized patients with discordant Clostridioides difficile assays in an urban hospitalized setting.
27. COVID-19 and Clostridioides difficile Coinfection Analysis in the Intensive Care Unit.
28. Environmental and Nutritional Parameters Modulating Genetic Expression for Virulence Factors of Clostridioides difficile.
29. Identifying Contact Time Required for Secondary Transmission of Clostridioides difficile Infections by Using Real-Time Locating System.
30. Antimicrobial Effects of Some Natural Products on Adhesion and Biofilm Inhibition of Clostridioides difficile.
31. Effect of Leptin Receptor Q223R Polymorphism on Clostridioides difficile Infection-Induced Macrophage Migration Inhibitory Factor Production.
32. Comparison of rectal swabs and fecal samples for the detection of Clostridioides difficile infections with a new in-house PCR assay.
33. Incidence, Clinical Characteristics, and Outcomes of Clostridium difficile Infection in a Tertiary Care Center in Bahrain.
34. Clostridioides difficile in calves, cattle and humans from Dutch dairy farms: Predominance of PCR ribotype 695 (clade 5, sequence type 11) in cattle.
35. Early identification of a ward-based outbreak of Clostridioides difficile using prospective multilocus sequence type-based Oxford Nanopore genomic surveillance.

Fidaxomicin & Clostridium difficile

1. New treatment approaches for Clostridioides difficile infections: alternatives to antibiotics and fecal microbiota transplantation.

Clostridioides difficile vaccine

1. Letter to the Editor: A comparison of post-COVID vaccine myocarditis classification using the Brighton Collaboration criteria versus (United States) Centers for Disease Control criteria: an update.
2. Understanding the influence of the microbiome on childhood infections.
3. Impact of including productivity costs in economic analyses of vaccines for C. difficile infections and infant respiratory syncytial virus, in a UK setting.
4. IL-13 protects from C. difficile Colitis.

Vancomycin & CDI

1. Genetic determinants of resistance to antimicrobial therapeutics are rare in publicly available Clostridioides difficile genome sequences.
2. Impact of the coronavirus disease 2019 pandemic on the incidence of other infectious diseases in the hematology hospital in Korea.
3. Efficacy Assessment of the Co-Administration of Vancomycin and Metronidazole in Clostridioides difficile-Infected Mice Based on Changes in Intestinal Ecology.
4. Genotypic and phenotypic antimicrobial resistance of Irish Clostridioides difficile isolates, 2022.
5. Histidine kinase-mediated cross-regulation of the vancomycin-resistance operon in Clostridioides difficile.

CDI

1. Variations in Antimicrobial Resistance Genes Present in the Rectal Faeces of Seals in Scottish and Liverpool Bay Coastal Waters.
2. Fourth national Japanese antimicrobial susceptibility pattern surveillance program: Bacterial isolates from patients with complicated urinary tract infections.
3. The preventive effect of Gastrodia elata Blume extract on vancomycin-induced acute kidney injury in rats.
4. Randomized Placebo-Controlled, Biomarker-Stratified Phase Ib Microbiome Modulation in Melanoma: Impact of Antibiotic Preconditioning on Microbiome and Immunity.
5. Synergistic Interactions of Essential Oil Components with Antibiotics against Multidrug-Resistant Corynebacterium striatum.
6. Chemical constituents of the aerial parts of Mitracarpus hirtus (L.) DC (Rubiaceae).
7. Linezolid Toxicity: A Clinical Case Report.
8. Group B Streptococcus Brain Abscess in a Neonate with Bilateral Otorrhea.
9. A randomized, double-blind, positive-controlled, Phase-II clinical trial to evaluate efficacy and safety of Fuke Qianjin capsule in Pakistani patients with pelvic inflammatory disease.
10. Unitary Tract Infection Treatment: When to Use What Agents including Beta-lactam Combination Agents.
11. The virtue of training: extending phage host spectra against vancomycin-resistant Enterococcus faecium strains using the Appelmans method.
12. Actinotignum schaalii infection: Challenges in diagnosis and treatment.
13. Iron-tannic acid nano-coating: A promising treatment approach for enhancing Lactococcus lactis antibiotic resistance.
14. Blood-Stream Infections: Causative Agents, Antibiotic Resistance and Associated Factors in Older Patients.
15. Vancomycin-Induced Neutropenia With Subsequent Perioperative Readministration: A Case Report.
16. Mechanisms of acquisition of vanA operon among vancomycin-resistant Staphylococcus aureus genomes: the tip of the iceberg?
17. Intrawound Vancomycin Powder in Primary Total Hip Arthroplasty: A Prospective Quality Control Study.
18. Metronidazole and cefazolin versus cefazolin alone for surgical site infection prophylaxis in gynecologic surgery at a comprehensive cancer center.
19. Tackling antibiotic contaminations in wastewater with novel Modified-MOF nanostructures: A study of molecular simulations and DFT calculations.
20. Clinical manifestations, antimicrobial resistance and genomic feature analysis of multidrug-resistant Elizabethkingia strains.
21. Characteristics of Clinical Isolates of Listeria monocytogenes in Sichuan, China, in 2022 Based on Whole Genome Sequencing Analysis.
22. Purplish Discoloration of Urine in a Patient Receiving Cefiderocol: A Rare Adverse Effect.
23. PROJECT PREVENT: a randomized controlled trial of preoperative vaginal metronidazole to decrease patient issues and infections after hysterectomy.
24. A Rare Cause of Empyema and Bacteremia Due to Shewanella Species in Alcoholic Cirrhosis Patients: A Case Report and Comprehensive Review of Literature.
25. Promising effects of 1,8 Cineole to control Giardia lamblia infection: Targeting the inflammation, oxidative stress, and infectivity.
26. Safety Profile of Seven-Day Intra-Articular Antibiotic Irrigation for the Treatment of Chronic Periprosthetic Joint Infection: A Prospective Randomized Phase II Comparative Study.
27. Staphylococcus aureus acquires resistance to glycopeptide antibiotic vancomycin via CXCL10.
28. Bosutinib Stimulates Macrophage Survival, Phagocytosis, and Intracellular Killing of Bacteria.
29. Critical view on antimicrobial, antibiofilm and cytotoxic activities of quinazolin-4(3H)-one derived schiff bases and their Cu(II) complexes.
30. A 10-year retrospective study of antibacterial-induced thrombocytopenia in a women and children hospital using China Hospital Pharmacovigilance System and Visual Basic for Applications.
31. Lincosamide monotherapy treatment of methicillin-resistant Staphylococcus aureus pneumonia in tropical Australia: a case series.
32. Effect modification of dosing strategy (AUC or trough) on AKI associated with vancomycin in combination with piperacillin/tazobactam or cefepime and meropenem.
33. Daptomycin and ceftaroline combination for the treatment of persistent methicillin-resistant Staphylococcus aureus bloodstream infections: a case series and literature review.
34. Mesoporous cobalt-manganese layered double hydroxides promote the activation of calcium sulfite for degradation and detoxification of metronidazole.
35. Surface-mediated fluorescent sensor array for identification of gut microbiota and monitoring of colorectal cancer.
36. Metronidazole may display anti-inflammatory features in periodontitis treatment: A scoping review.
37. Monitoring Pharmaceuticals and Personal Care Products in Healthcare Effluent Wastewater Samples and the Effectiveness of Drug Removal in Wastewater Treatment Plants Using the UHPLC-MS/MS Method.
38. The Impact of Colonization by Multi Drug Resistant Bacteria on Graft Survival, Risk of Infection, and Mortality in Recipients of Solid Organ Transplant: Systematic Review and Meta-analysis.

FMT/ Fecal Microbiota Transplant

1. New treatment approaches for Clostridioides difficile infections: alternatives to antibiotics and fecal microbiota transplantation.

Competitors

1. American Society for Gastrointestinal Endoscopy-European Society of Gastrointestinal Endoscopy guideline on primary endoscopic bariatric and metabolic therapies for adults with obesity.
2. American Society for Gastrointestinal Endoscopy-European Society of Gastrointestinal Endoscopy guideline on primary endoscopic bariatric and metabolic therapies for adults with obesity.
3. A pairwise approach to revitalize β-lactams for the treatment of TB.
4. Monoclonal antibody-mediated neutralization of Clostridioides difficile toxin does not diminish induction of the protective innate immune response to infection.

CDAD

1. Topology Regulated Background Extraction (TRBE) method for eye fundus images.
2. Clinical outcomes and treatment necessity in patients with toxin-negative Clostridioides difficile stool samples.
3. Scutellaria baicalensis Georgi alleviates Clostridium difficile associated diarrhea and its modulatory effects on the gut microbiota.
4. Critically Evaluating the Role for Postoperative Antibiotics in Patients Undergoing Urethroplasty with Buccal Mucosa Graft: A Claims Database Analysis.
5. Impact of time to treatment in first occurrence, non-severe Clostridioides difficile infection for elderly patients: are we waiting too long to treat?
6. Outcomes and risk factors for mortality in clostridioides difficile infection in patients with NAFLD and NASH.

CMC

1. Active surveillance pharmacovigilance for Clostridioides difficile infection and gastrointestinal bleeding: an analytic framework based on case-control studies.

Guidelines

1. The potential for artificial intelligence to transform healthcare: perspectives from international health leaders.
2. Infectious Diseases: What You May Have Missed in 2023.
3. Defining predictors of responsiveness to advanced therapies in Crohn's disease and ulcerative colitis: protocol for the IBD-RESPONSE and nested CD-metaRESPONSE prospective, multicentre, observational cohort study in precision medicine.
4. The Association Between Duration of Antibiotics and Infectious Complications Following Radical Cystectomy: Analysis of the 2019-2021 NSQIP Database.
5. Guideline for the management of Clostridioides difficile infection in pediatric patients with cancer and hematopoietic cell transplantation recipients: 2024 update.
6. Not So Fast: Extended Oral Antibiotic Prophylaxis Does Not Reduce 90-Day Infection Rate Following Joint Arthroplasty.
7. Fecal microbiota transplantation for irritable bowel syndrome: Current evidence and perspectives.
8. Geospatial quality assessment of locally available ice for heavy metals and metalloids and their potential risks for human health in Karachi, Pakistan.
9. Incorporating patient, nursing and environmental factors into antimicrobial stewardship: effects of simplifying treatment from cefuroxime to ceftriaxone.
10. Probiotic formulations and gastro-intestinal diseases in the paediatric population: a narrative review.

Non-toxigenic C. difficile

1. An ultrasensitive genosensor for detection of toxigenic and non-toxigenic Clostridioides difficile based on a conserved sequence in surface layer protein coding gene.

MGB

Other news of possible interest