



Sameeksha* – Infection Prevention and Control for COVID-19

* *Sameeksha* is a Hindi word, meaning review. This compilation of recent key IPC resources on COVID-19 includes brief summary of relevant publications from scientific journals; guidelines from WHO, Ministry of Health and Family Welfare and others; training and IEC resources; and links between COVID-19 and AMR. The intended target audience for this includes clinical and public health professionals interested in IPC at both public and private sector in India. Kindly note: inclusion of publications/resources in this review/compilation does not imply an endorsement by WHO.

Key highlights of volume 24

- WASH to control COVID-19
- Imagining the future of pandemics and epidemics
- Maintaining infection prevention and control measures for COVID-19 in health care facilities
- Systemic antibiotic sales and WHO recommendations in India

Publications from scientific journals

WASH to control COVID-19: a rapid review

- Effectiveness of WASH interventions in reducing transmission of COVID-19 was assessed – hand washing, sterilization of hands, gargling, cleaning/shower after attending to COVID-19 patients was found to be effective, suggesting the importance of timely implementation of WASH interventions along with other public health interventions.

Frontiers | Review article | 11 August 2022 | [Online link](#)

Temperature thresholds and screening of febrile people by non-contact measurement of the face using infrared thermography – a methodology proposal

- Given the widespread use of infrared thermal screening, the study assesses choice of region for infrared thermal screening and temperature thresholds, derived by testing among 198 volunteers.

Sensing and Bio-Sensing Research | Research article | 6 August 2022 | [Online link](#)

Co-infection and ICU-acquired infection in COVID-19 ICU patients: a secondary analysis of the UNITE-COVID data set

- An assessment of 4994 COVID-19 confirmed adult patients revealed that ICU acquired infections were found to be considerably more than pre-pandemic surveillance and co-infection at admission to ICU was relatively rare.

BMC Critical Care | Research article | 3 August 2022 | [Online link](#)

Social distancing and revenue management: a post pandemic adaptation for railways

- The study proposes a mixed-integer programming model for seat assignment on trains to ensure social distancing and revenue maximization.
- Validity and effectiveness assessments demonstrate a significant reduction in risk of transmission and increase in seat utilization.

Omega | Research article | 13 August 2022 | [Online link](#)

Self-reported antibiotic stewardship and infection control measures from 57 intensive care units: an international ID-IRI survey

- A cross-sectional assessment of AMS and IPC activities in ICUs in 24 countries revealed that most centres had functional AMS and IPC programs.
- The main barriers were identified as unqualified healthcare, deficient incentives and resources, and inefficient inter-professional interactions.

Journal of Infection and Public Health | Research article | 25 July 2022 | [Online link](#)

Health-care-associated bloodstream and urinary tract infections in a network of hospitals in India: a multicentre, hospital-based, prospective surveillance study

- First standardised HAI surveillance network in India – successful in implementing locally adapted and context-appropriate protocols consistently across 26 tertiary-level hospitals.
- The network identified a large number of healthcare associated blood stream and urinary tract infections with high AMR rates – highlighting the importance of multi-modal approach for HAI prevention and AMR containment strategies.

The Lancet Global Health | Research article | 1 September 2022 | [Online link](#)

Indispensable yet invisible: a qualitative study of the roles of carers in infection prevention in a South Indian hospital

- The study explores the role of caregivers in IPC since they are actively involved in clinical decision making and physical environment of the patient but have limited education/training to support these roles.
- The author suggests that the current models of patient and carer involvement in IPC are not aligned with sociocultural aspects of care.

International Journal of Infectious Diseases | Research article | 18 August 2022 | [Online link](#)

Assessment of COVID-19 vaccination-related medical waste management practices in Bangladesh

- The DPSIR (drivers, pressure, state, impact and response) framework was used to analyse the biomedical waste management practices in the COVID-19 vaccination program in Bangladesh.
- The study found excellent segregation systems but very poor waste handling and disposal methods for syringes, sharps, and vials.

Plos One | Research article | 18 August 2022 | [Online link](#)

How do the contaminated environment influence the transmission dynamics of COVID-19 pandemic?

- A mathematical modelling study that analyses the transmission dynamics of SARS-CoV-2 in India accounting for environment contamination by infected individuals.
- The model revealed that the number of infected individuals increased with the rate of environment contamination, and it did not increase drastically when the environment was disinfected.

The European Physical Journal Special Topics | Research article | 22 August 2022 | [Online link](#)

Risk of surgeon contracting COVID-19 while operating on COVID-19 positive patient, impact of safety measures: lessons learnt

- A retrospective observation study that studied 78 instances of surgeons at risk of contracting COVID-19 from their patient and use of safety measures.
- The incidence of COVID-19 among surgeons was found to be low (1.3%) and the authors suggest a balanced use of safety measures since adopting all universal safety measures may not be cost-effective.

The Surgery Journal | Research article | 22 August 2022 | [Online link](#)

Recent advances in copper and copper-derived materials for antimicrobial resistance and infection control

- Reviews current research on potential use of copper (in various forms) as an antimicrobial agent against SARS-CoV-2 virus.
- Studies showed that copper derived materials were effective antimicrobial agents with promising biological application, however feasibility, durability and cost are yet to be explored.

Current Opinion in Biomedical Engineering | Review article | 23 August 2022 | [Online link](#)

Guidelines

Maintaining infection prevention and control measures for COVID-19 in health care facilities

- The policy brief provides key IPC measures and strategies which may be used by member states while updating their COVID-19 IPC policies to maintain IPC achievements and maintain operational readiness for COVID-19 and other emerging and re-emerging pathogens.

WHO | Policy brief | 14 September 2022 | [Online link](#)

Imagining the future of pandemics and epidemics: a 2022 perspective

- This report attempts to explore the future of infectious threats to encourage immediate action, and provides an opportunity to identify risks, implications, and possible solutions for preventing or mitigating the impact of current and future infectious disease threats.

WHO | Report | 4 September 2022 | [Online link](#)

Implications of the COVID-19 pandemic for patient safety: a rapid review

- The pandemic uncovered a range of health system safety gaps for patients, health workers, and public.
- This review focusses on the impact of the pandemic on patient safety in terms of risks and avoidable harm.

WHO | Report | 5 August 2022 | [Online link](#)

Progress on WASH in health care facilities 2000-2021: special focus on WASH and infection prevention and control

- In least developed countries, only 53% health facilities have access to a protected water source on-premises.

WHO-UNICEF JMP for WASH | Report | 30 August 2022 | [Online link](#)

Good practice statement on the use of second booster doses for COVID-19 vaccines

- Developed based on the advice issued by the Strategic Advisory Group of Experts (SAGE) on Immunization.
- It summarizes latest literature on COVID-19 vaccination including booster doses.

WHO | Guideline | 18 August 2022 | [Online link](#)

Assessment of workforce capacity and training needs for the prevention and control of communicable diseases in the EU/EEA – report on 2021 survey

- Presents the findings of a survey that was conducted to assess the workforce capacity, perceived training needs, and relevance of IPC training by ECDC.

ECDC | Report | 3 August 2022 | [Online link](#)

Framework and toolkit for infection prevention and control in outbreak preparedness, readiness, and response at the health care facility level

- Healthcare facilities can amplify transmission of emerging infectious diseases or multi-drug organisms, thus necessitating evidence-based IPC for outbreak management.
- This toolkit provides a framework and resources to support IPC improvements in all healthcare facilities and specific to each infectious disease.

WHO | Guideline | 6 September 2022 | [Online link](#)

Clinical management of COVID-19

- Emphasized the importance of establishing and sustaining clear clinical care pathways for COVID-19.
- It also mentions the importance of integrating COVID-19 clinical care pathways into the primary healthcare system.

WHO | Policy brief | 14 September 2022 | [Online link](#)

Landscape of observational studies on the effectiveness of COVID-19 vaccination

- Provides an overview of observational studies conducted to assess effectiveness of COVID-19 vaccination.
- It highlights key features of each study including study design, sample size, study population, key outcomes measured, and location of study.

WHO | Technical document | 16 September 2022 | [Online link](#)

Training / IEC resources

Drivers and modifiers of antibiotic prescribing and IPC practices in healthcare settings

- A video lecture on behavioural aspects linked with MDR microorganism prevention and control interventions.

ECDC | E-learning lecture | 3 May 2022 | [Online link](#)

COVID-19 and Antimicrobial Resistance

Systemic antibiotic sales and WHO recommendations, India

- Sale of Access, Watch and Reserve (AWaRe) antibiotics comprised 5.8, 5.6 and 0.1 billion standard units.
- 229 formulations of fixed-dose combinations (FDCs) on the WHO not-recommended list, were sold of which 13 were in the top-20 selling antibiotic FDCs.

Bulletin of WHO | Research article | 22 August 2022 | [Online link](#)

A perfect storm: COVID-19 and antimicrobial resistance

- Reviews the impact of COVID-19 pandemic on the fight against AMR.

EMJ Microbiology & Infectious Diseases | Article | 5 September 2022 | [Online link](#)

Country data on AMR in India in the context of community-acquired RTIs

- Reviews the current scenario of AMR in India and recommends using a standardized inclusive approach to developing local guidelines and using up-to-date local surveillance data from community-acquired infections.

Journal of Antimicrobial Chemotherapy | Research article | 6 September 2022 | [Online link](#)

COVID-19: U.S. impact on antimicrobial resistance, special report 2022

- Details the impact of the pandemic on five core actions to combat AMR and emphasizes the need to continue investing in prevention focussed public health actions to combat AMR.

CDC | Report | 14 June 2022 | [Online link](#)

Urban monitoring of antimicrobial resistance during a COVID-19 surge through wastewater surveillance

- Highlights the importance of wastewater-based epidemiology in supporting AMR surveillance by providing community-level data to help identify current and emerging AMR threats.

Science of the Total Environment | Research article | 7 September 2022 | [Online link](#)

The impact of COVID-19 on antimicrobial prescription and drug resistance in fungi and bacteria

- Multidrug-resistant infections were a common complication, emphasizing the importance of continuous surveillance of resistant infection and rational use of antimicrobials.

Brazilian Journal of Microbiology | Research article | 10 September 2022 | [Online link](#)