



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 in both public and private sector in India. Kindly note: inclusion of publications and resources in this review/compilation does not imply an endorsement by WHO.

Key highlights of volume 22

- What is needed to sustain improvements in hospital practices post-COVID-19?
- Development of an ultraviolet-C irradiation room for safe re-utilization of personal protective respirators
- WHO guideline on IPC in the context of COVID-19
- WHO toolkit for clinical care of severe acute respiratory infections
- Systematic review and meta-analysis of antimicrobial resistance in COVID-19 patients

Publications from scientific journals

What is needed to sustain improvements in hospital practices post-COVID-19? a qualitative study of interprofessional dissonance in hospital infection prevention and control

- Interprofessional differences and inconsistencies constrain IPC practice improvement.
- Authors propose an ethical framework to guide interprofessional collaboration for ensuring improvements in IPC and bio-preparedness.

BMC Health Services Research | Research article | 14 April 2022 | [Online link](#)

Development of an ultraviolet-C irradiation room in a public Portuguese hospital for safe re-utilization of personal protective respirators

- Shows the effectiveness of ultraviolet-C (UV-C) for sterilization of FFP2 respirator masks used by healthcare staff in intensive care units.
- Similar UV-C disinfecting rooms may be considered to avoid PPE shortages and reduce environmental burden.

International Journal of Environmental Research and Public Health | Article | 16 April 2022 | [Online link](#)

Airborne or droplet precautions for health workers treating Coronavirus disease 2019?

- Current review of literature supports airborne precautions for preventing infections in health workers managing patients of COVID-19.

The Journal of Infectious Diseases | Review | 1 May 2022 | [Online link](#)

The impact of heating, ventilation, and air conditioning design features on the transmission of viruses, including the 2019 novel coronavirus: a systematic review of ultraviolet radiation

- Systematic review of literature shows that viruses and bacteriophages are inactivated by UV radiation.
- While UV radiation has been shown to be effective in inactivating viruses and reducing disease transmission, practical implementation of UVGI in HVAC systems needs to consider airflow patterns, air changes per hour, and UV device location.

PLoS ONE | Research article | 8 April 2022 | [Online link](#)

Is safe distance enough to prevent COVID-19? Dispersion and tracking of aerosols in various artificial ventilation conditions using OpenFOAM

- Computational fluid dynamics based dispersion modelling of aerosols produced by respiratory activities suggests that even 4 metres of physical distancing may not avoid virus load completely in a closed room.
- Improper mask wearing leads to escape of SARS-CoV-2 contaminated aerosols having a smaller aerodynamic diameter from the gap between face mask and face, infecting different surfaces in the vicinity.

Gondwana Research | Article | 8 April 2022 | [Online link](#)

Implementation of infection prevention and control practices in an upcoming COVID-19 hospital in India: an opportunity not missed

- Fear psychosis in the pandemic was the greatest facilitator for adopting the IPC practices. Continuous wearing of PPE for long duration, dissatisfaction with the duty rosters as well as continuous posting in high-risk areas were the major obstacles to the implementation of IPC norms.
- Recognising the role of an infection control team, repeated training, monitoring and improvisation of the existing resources are keys for successful implementation of IPC practices in hospitals during the COVID-19 pandemic.

PLoS ONE | Research article | 23 May 2022 | [Online link](#)

Impact of the COVID-19 pandemic on levels of device-associated infections and hand hygiene compliance

- Although the impact of the COVID-19 pandemic was not evident over the device-associated infections (DAI), the compliance of healthcare workers to prevention bundles and hand hygiene in ICU was improved.

Cureus | Original article | 18 April 2022 | [Online link](#)

Guidelines

Infection prevention and control in the context of coronavirus disease (COVID-19)

- Updated guidance prompted by new evidence around mask use and COVID-19 transmission, as well as the emergence of variants of concern including Omicron.
- Provides updated interim recommendations on the use of masks by health workers providing care to patients with suspected or confirmed COVID-19.

WHO | Living guideline | 25 April 2022 | [Online link](#)

Clinical care of severe acute respiratory infections

- This updated version includes new tools and adapted algorithms, checklists, memory aids for COVID-19 and influenza, and the latest clinical evidence regarding clinical management of SARI.
- Intended for clinicians caring for SARI patients and covers epidemiology of SARI, screening and triage, IPC, monitoring of patients, laboratory diagnosis, as well as antimicrobial and immunomodulator therapies.

WHO | Toolkit | 6 April 2022 | [Online link](#)

Injection safety in the context of coronavirus disease (COVID-19) vaccination

- Confirms WHO guidance and policy on injection safety in the context of the extraordinary increase in global injections resulting from COVID-19 immunization campaigns.
- Also calls attention to information on specialized syringes for COVID-19 vaccines and broad short-term and long-term solutions to address and alleviate supply shortages related to vaccine products with non-standard dose volumes.

WHO | Addendum to policy brief | 5 April 2022 | [Online link](#)

COVID-19 aviation health safety protocol: operational guidelines for the management of air passengers and aviation personnel in relation to the COVID-19 pandemic

- Fourth issue of the EASA and ECDC operational guidelines for the management of air passengers and aviation personnel in relation to the COVID-19 pandemic incorporates recent evidence regarding the effectiveness of COVID-19 vaccination as well as the implementation experience of the recommended nonpharmaceutical interventions for air travel.

ECDC | Guideline | 11 May 2022 | [Online link](#)

Training / IEC resources

How do COVID-19 mRNA vaccines work?

- Explains mRNA technology, how it works and how is it used in developing vaccines for infectious diseases.

ECDC | Video | 28 April 2022 | [Online link](#)

Why were COVID-19 mRNA vaccines developed so fast?

- Explains how it was possible to develop COVID-19 vaccines so quickly, and the quality control of producing COVID-19 vaccines.

ECDC | Video | 28 April 2022 | [Online link](#)

COVID-19 and Antimicrobial Resistance

Antimicrobial resistance in COVID-19 patients: a systematic review and meta-analysis (November 2019–June 2021)

- AMR prevalence was high during the pandemic in COVID-19 patients and varied by hospital and geography.
- Further research is needed to improve surveillance, IPC practices and antimicrobial stewardship programmes.

Antimicrobial Resistance & Infection Control | Research article | 7 March 2022 | [Online link](#)

Global resilience and new strategies needed for antimicrobial stewardship during the COVID-19 pandemic and beyond

- Provides examples of antimicrobial stewardship resilience from pharmacists and physicians from seven countries.
- Serves as an example of how resilience and global collaboration is sustaining our ASPs by sharing new “how to” do antimicrobial stewardship practices during the COVID-19 pandemic.

JACCP | Article | 24 March 2022 | [Online link](#)

Indiscriminate use of antibiotics for COVID-19 treatment in South Asian countries is a threat for future pandemics due to antibiotic resistance

- Indiscriminate use of antibiotics was observed in South Asian countries and other similar parts of the world.
- Authors emphasize the judicious use of antibiotics in COVID-19 therapy, especially in poor and developing countries across the globe.

Clinical Pathology | Commentary | 18 May 2022 | [Online link](#)

Antimicrobials in COVID-19: strategies for treating a COVID-19 pandemic

- During the early phase of the pandemic, hydroxychloroquine, ivermectin, azithromycin and doxycycline were widely recommended by national and international guidelines for possible prophylaxis or treatment for COVID-19 in outpatient as well as hospitalized settings.
- Despite cumulative evidence from subsequent clinical trials revealing no significant clinical benefits in any setting and the risk of adverse effects, the use of antimicrobials continues particularly in outpatient settings.

JBCPP | Article | 3 May 2022 | [Online link](#)

How COVID-19 has influenced public interest in antimicrobials, antimicrobial resistance and related preventive measures: a Google trends analysis of Italian data

- Authors analysed Google trends data in Italy from 2016 to 2021 to assess whether and how annual campaigns and the COVID-19 pandemic affected public interest in antimicrobials, AMR, hand hygiene, and the use of disinfectants.
- The COVID-19 pandemic had no effect on AMR but raised awareness on preventive measures. Influence of annual campaigns on public interest in AMR and preventive measures was modest and not long-term, and highlights the need for different policies, strategies and measures to advocate prevention of AMR in the COVID-19 era.

Antibiotics | Article | 13 March 2022 | [Online link](#)