



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 26

- Infection control estimate, a digital tool for outbreak management
- IPC practices among healthcare workers and dentists in India
- IPC and immunization guidelines on COVID-19
- Three new OpenWHO online courses on AMR and IPC
- Antibiotic prescription among pediatric patients in India
- Impact of COVID-19 on multidrug-resistant organisms

Publications from scientific journals

Implementation of the infection control estimate: a case study on the use of a newly developed digital tool for outbreak management in the acute setting

- Infection control estimate (ICE), a seven-question digital tool to monitor and assess the management of outbreaks, was piloted during a 2021 outbreak in a UK hospital.
- ICE was reported to be an effective, user-friendly tool which should be further evaluated.

Journal of Infection Prevention | Research article | 15 September 2022 | [Online link](#)

COVID-19 prevalence and infection control practices among dentists in Andhra Pradesh State, India

- An online survey of 1876 dentists in Andhra Pradesh, to estimate prevalence of COVID-19 and associated IPC practices among dentists.
- Two thirds of dentists reported using protective full-face shield and N-95 or equivalent masks during procedures while use of pre-procedural mouthwash was reportedly infrequent.
- The study found a high prevalence of COVID-19 among dentists, underscoring the importance of COVID-19 IPC protocols for dental practice.

Work | Research article | 17 January 2023 | [Online link](#)

Virtual reality as a learning tool for improving infection control procedures

- Fourth year medical students undergoing IPC training were randomly assigned to either conventional lecture-based training with PowerPoint slides or virtual reality (VR) session.
- Both types of training were similarly effective in improving IPC knowledge and practice but students in the VR session expressed greater enjoyment in the learning process.

American Journal of Infection Control | Research article | 19 January 2023 | [Online link](#)

Exploring factors influencing the compliance of patients and family carers with infection prevention and control recommendations across Bangladesh, Indonesia, and South Korea

- Using qualitative methods this study explored IPC compliance among patients and their family/private carers who provide direct care in hospitals.
- Suggests that revisions in IPC policies and guidelines should consider family carers, including cultural values and social norms.

Frontiers Public Health | Research article | 22 December 2022 | [Online link](#)

A simulation-based PPE orientation training curriculum for novice physicians

- First year residents participated in a CDC training program that including donning and doffing of PPE and UV light examination for contamination.
- Pre and post training surveys indicated improved knowledge in PPE and infectious diseases transmission modes among the participating 48 residents, as well as reduced contamination after doffing PPE.

Infection Prevention in Practice | Research article | 30 December 2022 | [Online link](#)

Factors affecting turnaround time of SARS-CoV-2 sequencing for inpatient infection prevention and control decision making: analysis of data from the COG-UK HOCl study

- A mixed methods study assessed turnaround time (TAT) and challenges to fast TAT for sequencing results of COVID-19 among multiple sequencing sites in the UK.
- Among the 492 samples, the median TAT was 5.1 days with high inter-site variability, ranging from 3 to 29 days.
- Optimal solution to reduce TAT was suggested as integrating sequencing into diagnostic laboratories.

The Journal of Hospital Infection | Research Article | January 2023 | [Online link](#)

Disappearance and re-emergence of influenza during the COVID-19 pandemic: association with infection control measures

- WHO influenza surveillance data were utilised to analyse influenza patterns in 34 countries over four seasons between 2020-2021 in relation to infection control measures.
- Higher mask use ratio and low social distancing index were associated with lower rates of influenza, supporting the notion that seasonal influenza is controllable through effective IPC measures.

Viruses | Research article type | 13 January 2023 | [Online link](#)

Physical interventions to interrupt or reduce the spread of respiratory viruses

- Effectiveness of masks, respirators and hand hygiene to interrupt or reduce the spread of acute respiratory viruses was reviewed.
- The literature shows that hand hygiene programmes may help to slow the spread of respiratory viruses but role of masks or respirators in reducing their spread is uncertain.

Cochrane Database of Systematic Reviews | Systematic review | 30 January 2023 | [Online link](#)

Assessment of potential risk factors for COVID-19 among health care workers in a health care setting in Delhi, India – a cohort study

- A prospective cohort study found a 62% seropositive rate among 192 HCWs working in a tertiary care COVID-19 hospital largely attributed to concurrent vaccination of HCWs.
- Good adherence to PPE and IPC was observed, although lower among paramedics.

PLOS One | Research article | 20 January 2023 | [Online link](#)

Clinical presentation and infection prevention control practices in health-care workers diagnosed with COVID-19 in a dedicated COVID hospital, Mumbai

- A prospective cohort study of health care workers (HCWs) in a dedicated COVID-19 hospital, as part of an international multi-centric WHO study.
- A relatively low incidence (1.8%) was attributed to universal training of HCWs in IPC.

Journal of the Scientific Society | Research article | 27 December 2022 | [Online link](#)

Prevalence and correlates of knowledge and practices regarding infection prevention and control, and triage in primary healthcare settings: a cross-sectional study in Bangladesh

- Survey of 312 HCWs working in primary health care facilities across 6 districts in Bangladesh revealed poor self-reported knowledge of IPC.
- Among 4 domains of IPC knowledge, results were highest for personal hygiene.
- HCWs require rigorous education and training on medical instrument processing, waste management and triage, especially at community clinics.

Infection Prevention in Practice | Research article | 5 December 2022 | [Online link](#)

Guidelines

Infection prevention and control in the context of coronavirus disease (COVID-19): a living guideline

- Fourth update of WHO's IPC guidelines for both health care and community settings.
- Integrates new evidence on emerging variants of concern, population immunity and uptake of vaccines, as well as updated guidelines on mask wearing in communities.

WHO | Guideline | 13 January 2023 | [Online link](#)

Meeting of the Strategic Advisory Group of Experts on Immunization, October 2022: conclusions and recommendations

- South-East Asia region has witnessed a decline in overall immunization coverage in 2020 and 2021 is updating national immunization strategies to align with the Regional Vaccine Action Plan, 2022-2030.
- Provides latest evidence and global recommendations on COVID-19, Monkeypox, RSV, and polio vaccination, as well as Immunization Agenda 2030, regional reports, and an update on ebolavirus outbreak in Sudan.

WHO | Journal article | 6 January 2023 | [Online link](#)

Training / IEC resources

Outbreak investigations in health facilities

- Free online course where participants learn to define healthcare associated infections (HAI), describe HAI outbreaks in health facilities and identify appropriate IPC control measures.
- Takes approximately 3 hours.

OpenWHO | Online course | 5 December 2022 | [Online link](#)

Antimicrobial resistance and infection prevention and control

- Free online course where participants acquire an overview of AMR, role of IPC in reducing AMR and the use of WHO's multimodal strategy to reduce and prevent AMR.
- Takes approximately 3 hours.

OpenWHO | Online course | 5 December 2022 | [Online link](#)

Health-care associated infection surveillance

- Free online course where participants learn about HAIs and their burden, conducting effective HAI surveillance and assessing effectiveness of interventions to reduce HAIs.
- Takes approximately 3.5 hours.

OpenWHO | Online course | 5 December 2022 | [Online link](#)

COVID-19 and Antimicrobial Resistance

Unintended impact of COVID-19 pandemic on the rate of catheter related nosocomial infections and incidence of multiple drug resistance pathogens in three intensive care units not allocated to COVID-19 patients in a large teaching hospital

- Pre and post-surveys were conducted in 2019 and 2020 to assess rates of HAIs among adults in ICUs in a hospital setting in Iran.
- Rates of ventilator associated pneumonia decreased, which was attributed to increased IPC practices related to COVID-19, including hand hygiene and environmental cleaning.

BMC Infectious Diseases | Research article | 6 January 2023 | [Online link](#)

Antibiotic prescription audits among pediatric outpatients with acute ailments in a secondary care hospital during the COVID-19 Omicron wave in Northern India

- Prescription audit surveys at a private paediatric hospital in Uttar Pradesh revealed non-generic, predominantly oral, presumptive antibiotic prescription in two out of three young paediatric patients.
- Highlighted the urgent need for improvement of prescription practices through regulation, monitoring and antibiotic stewardship.

Cureus | Research article | 29 November 2022 | [Online link](#)

The impact of COVID-19 on multidrug-resistant organisms causing healthcare-associated infections: a narrative review

- Increased reports of HAIs due to MDR organisms during the COVID-19 pandemic were due to human resources and equipment shortages, COVID-19 therapeutics and antibiotic consumption.
- Highlights the importance of IPC and antimicrobial stewardship.

JAC Antimicrobial Resistance | Review article | 29 December 2022 | [Online link](#)

Temporal trends in microbial detection during the COVID-19 pandemic: analysis of the Japan surveillance for Infection Prevention and Healthcare Epidemiology database

- Analysis of the J-SIPHE database revealed a decline in the incidence of microbial infections between 2019 and 2020 which was attributed to a lower bed occupancy rate in inpatient care settings.
- A weak increasing trend was reported in antimicrobial use, while the use of hand sanitiser increased by about 50%.

Journal of Infection and Chemotherapy | Research note | January 2023 | [Online link](#)

A cross-sectional study of hospital antimicrobial stewardship programmes in the COVID-19 era

- A survey to assess the influence of COVID-19 pandemic on ASPs was conducted across health care facilities in the Canadian province of Ontario in 2021.
- ASPs made significant contributions towards pandemic response despite resource constraints, but they require further capacity building.

JAC Antimicrobial Resistance | Research article | 29 December 2022 | [Online link](#)