

Sameeksha* – Infection Prevention and Control for COVID-19

* *Sameeksha* is a Hindi word, meaning review. This is a compilation of recent key IPC resources on COVID-19 from scientific journals, WHO guidelines, Ministry of Health and Family Welfare /Government of India guidelines, and trainings and IPC resources. 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 15

- Risk of COVID-19 infection/transmission among children/adolescents in households, communities and schools
- Updated WHO guidance on IPC for COVID-19 during health care
- MoHFW's operational guidance for COVID-19 vaccination of pregnant women
- Learning package for rapid response teams in the context of COVID-19 in India
- Antimicrobial resistance and COVID-19 syndemic – impact on public health

Publications from scientific journals

Risk of infection and transmission of SARS-CoV-2 among children and adolescents in households, communities and educational settings: a systematic review and meta-analysis

- Children (<10 years) had lower susceptibility to COVID-19, whereas adolescents in communities and high schoolers had comparable risk when compared to adults. The risks of infection among children in educational settings was lower than in communities.
- Evidence from school-based studies demonstrate that it is largely safe for children (<10 years) to be at schools, however older children (10-19 years) might facilitate transmission.

Journal of Global Health | Review | 17 July 2021 | [Online link](#)

Biodegradable and multifunctional surgical face masks: a brief review on demands during COVID-19 pandemic, recent developments, and future perspectives

- Focuses on surgical face mask structures and classifications, their impact on our environment, some of their desirable functionalities, and the recent developments around their biodegradability.
- Reviews viable biodegradable materials options, along with respective processing requirements and final performance and discusses that high-efficiency face masks can be further functionalized to incorporate other values and benefits including temperature/health monitoring, antibacterial, anti-viral, self-sanitizing properties, and fit/comfort.

Science of the Total Environment | Review | 24 July 2021 | [Online link](#)

Nationwide infection control strategy lowered seasonal respiratory infection rate: occupational health care perspective during the COVID-19 epidemic in Finland

- Rapid decline in number of respiratory diagnoses in occupational healthcare was seen after COVID-19 control measures were implemented by the Finnish government.
- Employee compliance was affected by national social security system, adoption of telework, and attitudes to work, sick leave, and recommendations by the authorities.
- Occupational healthcare should promote preparatory plans for future epidemics and pandemics to mitigate spread of respiratory infection among workers.

Infectious Diseases | Original Article | 1 July 2021 | [Online link](#)

Prevention and Attenuation of Covid-19 with the BNT162b2 and mRNA-1273 Vaccines

- Participants in the prospective cohort study involving 3975 health care personnel, first responders, and other essential and frontline workers completed weekly (for approx. 12 weeks) SARS-CoV-2 testing by providing mid-turbinate nasal swabs for qualitative and quantitative (RT-PCR) analysis.
- The authorized mRNA vaccines were highly effective among working-age adults in preventing SARS-CoV-2 infection, and reduced the viral RNA load, risk of febrile symptoms and duration of illness among those who had breakthrough infection despite vaccination.

NEJM | Original Article | 30 June 2021 | [Online link](#)

Surgical Site Infection after Cesarean Delivery in Times of COVID-19

- Retrospective study conducted in a maternity unit to compare personal protective equipment and products (PPEP) and occurrence of surgical site infection (SSI) after caesarean sections, in pre- and post-COVID period.
- Use of all PPEP items increased (76% for disposable masks) whereas SSI were reduced to roughly half.

RBGO | Short Communication | 28 June 2021 | [Online link](#)

Review of Aerosolized Hydrogen Peroxide, Vaporized Hydrogen Peroxide, and Hydrogen Peroxide Gas Plasma in the Decontamination of Filtering Facepiece Respirators

- As compared to aerosolized hydrogen peroxide, vaporized hydrogen peroxide has the most evidence supporting its efficacy for use in filtering facepiece respirators (FFRs) decontamination
- Vaporized hydrogen peroxide also does not degrade the filtration efficiency of the respirators.

American Journal of Infection Control | Article | 25 June 2021 | [Online link](#)

Hand hygiene compliance of healthcare workers before and during the COVID-19 pandemic: A long-term follow-up study

- The study found that hand hygiene compliance of healthcare workers decreased significantly over time, despite the COVID-19 pandemic.
- Demonstrated that healthcare workers go back to old hand hygiene routines once improvement initiatives are stopped.
- Electronic hand hygiene monitoring systems were found to be useful in assessing the effects of interventions.

American Journal of Infection Control | Article | 25 June 2021 | [Online link](#)

WHO and other guidelines

Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed

- Based on the available evidence and expert consensus, WHO advises that the current recommended IPC measures be reinforced and continue to be stringently implemented in the context of SARS-CoV-2 variants of concern. Currently WHO recommends that vaccinated persons should continue to adhere to public health and social measures and IPC measures, including in health facilities.
- Optimal compliance with appropriate use of personal protective equipment and hand hygiene by health workers is associated with decreased risk of SARS-CoV-2 transmission. Infection prevention and control training of health workers is associated with decreased risk of occupational acquisition of COVID-19.

WHO | Interim guidance | 12 July 2021 | [Online link](#)

Safe Eid al Adha practices in the context of COVID-19

- Suggested precautionary measures include 1) general infection prevention and control measures 2) advice to high-risk and vulnerable groups 3) advice on vaccination and to vaccinated individuals 4) use of masks by the general population 5) precautionary measures related to venues 6) ensure adequate ventilation of indoor spaces 7) encourage healthy hygiene 8) clean worship spaces, sites and buildings thoroughly and frequently.
- Guidance on safe animal-human interface and sacrificial slaughter include 1) animal management 2) slaughter facilities and practices 3) marketplaces.

WHO | Interim guidance | 13 July 2021 | [Online link](#)

Diagnostics, therapeutics, vaccine readiness, and other health products for COVID-19

- Tool designed to assess present and surge capacities for the treatment of COVID-19 in health facilities, with a focus on human resources, IPC measures, availability of PPE, diagnostics, therapeutics/health products, vaccines, and infrastructure. Section 5 focuses on IPC measures and PPE for COVID-19.

WHO | Interim guidance | 12 July 2021 | [Online link](#)

COVID-19 in children and the role of school settings in transmission – second update

- Children of all ages are susceptible to and can transmit SARS-CoV-2. Cases of SARS-CoV-2 in younger children appear to lead to onward transmission less frequently than cases in older children and adults.
- As a last resort, school closures can contribute to reduction in SARS-CoV-2 transmission but are insufficient to prevent community transmission in the absence of other nonpharmaceutical interventions and vaccination.

ECDC | Technical Report | 8 July 2021 | [Online link](#)

Technical considerations for implementing a risk-based approach to international travel in the context of COVID-19

- Updated document divided into three main sections: risk assessment, risk mitigation and risk communication provide national authorities with key considerations for establishing policies for international travel via air, sea or land between countries, territories or sub-national areas.
- Adherence to personal protective measures such as mask use and physical distancing must continue to be respected by all international travellers, both while on board conveyances and at points of entry.

WHO | Interim guidance | 2 July 2021 | [Online link](#)

Considerations for quarantine of contacts of COVID-19 cases

- Updated guidance for implementation of quarantine, including considerations for health authorities considering shortening the quarantine period, and updates on the care of children in quarantine.
- Authorities should ensure implementation of IPC measures for those in quarantine with focus on a) early recognition and control b) engineering and environmental controls c) administrative controls and d) personal protective equipment (PPE)

WHO | Interim guidance | 25 June 2021 | [Online link](#)

MoHFW guidelines

Operational Guidance for COVID-19 Vaccination of Pregnant Women

- Experts agree that the benefits of vaccination of pregnant women outweigh its potential risks.
- COVID appropriate behaviour needs to be ensured during the trainings of frontline workers.

MoHFW | Guidelines | 2 July 2021 | [Online link](#)

Training / IEC resources

Learning package for Rapid Response Teams in the context of COVID-19 in India

- Made for Rapid Response Teams (RRTs) at national, sub-national, district and sub-district levels
- Includes infection prevention and control, in addition to other key focus areas like capacity building, case finding/contact tracing, data management, management of laboratory aspects, community engagement and risk communication.

WHO | OpenWHO training course | July 2021 | [Online link](#)

Dose of protection for pregnant women

- Informs on importance and recommendation for COVID-19 vaccination for pregnant women.

MoHFW | Posters | 14 July 2021 | [English](#) [Hindi](#)

Clinical management of patients with COVID-19: Investigations and care for mild, moderate and severe disease

- The course provides crucial knowledge necessary to provide safe, effective quality patient care, including IPC techniques and safety measures for patients and health workers.

WHO | OpenWHO training course | July 2021 | [Online link](#)

Prevention, identification and management of infections in health workers in the context of COVID-19

- Provides an overview of strategies for the prevention, surveillance and testing of COVID-19 in health workers including the management following exposure and eventual safe return to work of health workers who have had suspected or confirmed SARS-CoV-2 infections.

WHO | OpenWHO training course | July 2021 | [Online link](#)

Antimicrobial Resistance and COVID-19

Antimicrobial resistance and COVID-19 syndemic: Impact on public health

- Reviews possible reciprocity between COVID-19 and antimicrobial resistance pandemics and outlines steps that could be undertaken at the level of the laboratory, by clinicians and by the government.
- Impact of the current pandemic, from AMR perspective might be disproportionate, varying with geographical regions and even different hospitals/areas within the same region.

Drug Discoveries & Therapeutics | Mini-Review | 30 June 2021 | [Online link](#)

Antibiotic resistance during and beyond COVID-19

- Sharp reductions in non-COVID-19 healthcare, IV antibiotic use and travel have reduced short-term selection pressure nationally, though selection may be increased locally in some ICUs with high workload.
- Social distancing and masks may impact community transmission of respiratory infections, reducing demand for antibiotics.

JAC-Antimicrobial Resistance | Article | 15 June 2021 | [Online link](#)

Increase of Antimicrobial Consumption in a Tertiary Care Hospital during the First Phase of the COVID-19 Pandemic

- The COVID-19 pandemic led to an increase in antimicrobial consumption with a different impact in defined daily doses (DDD)/100 discharges and DDD/100 patient-days.
- Future studies on antimicrobial use during COVID-19 and future pandemics should consider that the use of multiple indicators and an exploration of hospital resource indicators is necessary to analyse the determinants of variation, accurately draw conclusions, and plan antimicrobial stewardship interventions.

Antibiotics | Article | 25 June 2021 | [Online link](#)

Infection control, prophylactic antibiotics, and testing for SARS-CoV-2 and PPE on German intensive care units: results from a national mixed methods survey

- Out of responses from 205 German ICUs treating COVID-19 patients, 19% of participants reported wearing FFP3 mask as default face mask while majority reported using FFP3 masks only in the context of high-risk activities.
- 18.7% of responding ICUs provided antibiotic prophylaxis regularly in COVID-19 patients.

GMS Hygiene & Infection Control | Research Article | 14 June 2021 | [Online link](#)

The COVID-19 pandemic: a threat to antimicrobial resistance containment

- Amid the expanding COVID-19 pandemic and its management, governments and policymakers should consider the hidden threat of AMR, which, at present, is jeopardizing health, societal and economic advancements.
- Mobilization of substantial funding for research, better monitored antibiotic stewardship programs (ASP) as well as limiting the OTC supply of antibiotics are urgently needed to ensure containment of the COVID-19 and AMR.

Future Science | Perspective | 9 June 2021 | [Online link](#)