

# COVID-19 Infection Prevention and Control Sameeksha

WHO Country Office for India | 28 October 2020 | volume 7

*A compilation of recent publications on COVID-19 relevant for IPC and AMR containment in India*

## Publications from scientific journals

### Airborne spread of infectious SARS-CoV-2: Moving forward using lessons from SARS-CoV and MERS-CoV

- Detection of SARS-CoV-2 RNA in the air do not correlate with infectivity, and virus viability in air is important to understand the aerosol transmission.
- Temperatures ranging from 20 to 25 °C and relative humidity ranging from 40% to 50% were reported to have a protective effect on viral viability for airborne SARS-CoV and MERS-CoV.
- Experimental studies show that higher temperatures and high relative humidity can have a modest effect on SARS-CoV-2 viability in the environment, as reported in previous studies.

*Science of the Total Environment* | Review | 8 October 2020 | [Online link](#)

### COVID-19 in New Zealand and the impact of the national response: a descriptive epidemiological study

- The study shows that early and intense implementation of national COVID-19 suppression strategies have effectively altered the course of New Zealand's epidemic and limited the burden of disease and inequities in this high-income democratic setting, initially achieving COVID-19 elimination. 1503 cases were detected over the study period, including 95 (6.3%) hospital admissions and 22 (1.5%) COVID-19 deaths.
- This supports the WHO recommendations for timely decisive national leadership for evidence-informed, risk-based escalation and de-escalation decisions combining rigorous case detection, isolation, contact tracing, and quarantine measures with population education and engagement.

*The Lancet* | Article | 13 October 2020 | [Online link](#)

### Epidemiology and transmission dynamics of COVID-19 in two Indian States

- The study highlighted some differences in the disease pattern between lower and middle income countries (like the two Indian states – Tamil Nadu and Andhra Pradesh) and advanced countries – both cases and deaths were commoner in younger patients.
- This has implications in formulating preventive strategies especially regarding re-opening of educational institutions and also highlights the importance of active prospective surveillance, optimised recording of data and contact tracing to understand the transmission and infectivity of COVID19.

*A/IMS* | Literature appraisal | 15 October 2020 | [Online link](#)

## Characteristics of recovered COVID-19 patients with recurrent positive RT-PCR findings in Wuhan, China: a retrospective study

- The clinical characteristics, (RT-PCR) results from throat swab specimens and the results of serological COVID-19 rapid diagnostic test (RDT) for (SARS-CoV-2) which were retrospectively reviewed for a total of 758 recovered patients who were previously hospitalized in 17 hospitals and quarantined at 32 rehabilitation stations in Wuhan, China.
- In total, 59 patients (7.78%) had recurrent positive findings for COVID-19 on RT-PCR from throat swabs. Regarding antibody detection, 50/59 (84.75%) and 4/59 (6.78%) patients had positive IgG or dual positive IgG/IgM RDT results, respectively.
- Although there was a low prevalence of recurrent positive RT-PCR results for SARS-CoV-2 in recovered COVID-19 patients, most of them had evidence of an immune reaction, and the possibility of transmission of the virus by these patients needs further investigation.

*BMC Infectious Diseases* | Research Article | 13 October 2020 | [Online link](#)

## Environmental catastrophe of COVID-19: disposal and management of PPE in Bangladesh

- Substantial increased use of single-use-plastic polymers during the COVID-19 pandemic shall affect the poor waste management and its environmental dimensions.
- 14,500 tons of hazardous plastic waste were reported from disposal of single-use surgical face masks, hand gloves, hand sanitizers, and polythene bags in communities, hospitals, and other healthcare facilities in March–April 2020.
- The waste management operators and collectors should be given special training on occupational health and safety protocols on safe waste collection and management.

*Global Social Welfare* | Article | 8 October 2020 | [Online link](#)

## Survival of SARS-CoV-2 and influenza virus on the human skin: Importance of hand hygiene in COVID-19

- Numerous studies on the stability of SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV) indicate that these coronaviruses have relatively higher stability compared to that of enveloped viruses, such as influenza A virus.
- The stability of SARS-CoV-2 and influenza A virus (IAV), mixed with culture medium or upper respiratory mucus, on human skin surfaces and the dermal disinfection effectiveness of 80% (w/w) ethanol against SARS-CoV-2 and Influenza A virus was evaluated.
- The longer survival (approx. 9 hours) of SARS-CoV-2 on the skin than Influenza A virus, increases contact-transmission risk; however, hand hygiene can reduce this risk.

*Clinical Infectious Diseases* | Article | 3 October 2020 | [Online link](#)

## Disinfection of gloved hands during the Coronavirus outbreak (COVID-2019)

- This study tested the resistance of nitrile gloves to different disinfectant solutions.
- Common disinfectants especially those containing alcohol, decrease the breaking load of nitrile gloves.

*The Journal of Hospital Infection* | Article | 16 September 2020 | [Online link](#)

## Education is key: promoting a culture of hygiene among children

- Children and teachers from Lautoka Andhra Sangam School, Fiji, are supporting each other to create a culture of handwashing and making it a social norm in the school environment.
- “Together, with the teacher on duty for monitoring handwashing, the WASH student champions ensure that all taps have soap, and all classrooms have liquid soap.”
- This year’s Global Handwashing Day theme “Hand Hygiene for All” reminds of the immediate need for proper hand hygiene to respond and control the COVID-19 pandemic as well as the need to work towards lasting handwashing habits in the long-term.

*UNICEF* | Article | 15 October 2020 | [Online link](#)

## COVID-19 infection among healthcare workers in a national healthcare system: the Qatar experience

- Among 16,912 healthcare workers tested, 10.6% tested positive for COVID-19, of which 5% acquired infection at a COVID-19 facility and 95% at a non-COVID-19 facility. Exposure to a colleague (45%) or a patient (29%) were reported at non-COVID sites.
- Full PPE adherence was 82% at COVID-19 but only 68% at non-COVID-19 facilities.

*International Journal of Infectious Diseases* | Article | 15 September 2020 | [Online link](#)

## WHO and other guidelines

### COVID-19 infection prevention and control: communication toolkit for long-term care facilities

- Strong infection prevention and control (IPC) programmes are critical to protect staff, residents, and visitors of the Long-term care (LTC) facility.
- This communication toolkit contains a series of simplified messages and reminders based on WHO's technical guidance on infection prevention and control in the context of COVID-19.

*WPRO* | Toolkit | 8 October 2020 | [Online link](#)

### Infection prevention and control and preparedness for COVID-19 in healthcare settings – fifth update

- Provides guidance to healthcare facilities/providers in Europe on preparedness and infection prevention and control (IPC) measures for the management of possible and confirmed cases of COVID-19 in healthcare settings, including long-term care facilities (LTCF).
- In areas with community transmission of COVID-19, staff, visitors and patients should apply physical distancing, hand hygiene and respiratory hygiene, and wear face masks when physical distancing is not possible.
- LTCFs should designate lead persons or teams to ensure accountability, resources and procedures to address IPC measures, supplies of PPE and training; COVID-19 surveillance; testing for SARS-CoV-2 for the timely identification and control of outbreaks; access to medical and psychosocial care; and (5) visitors.

*ECDC* | Technical Report | 6 October 2020 | [Online link](#)

## COVID-19 infection prevention and control: preparedness checklist for long-term care facilities

- Strengthening infection prevention and control (IPC) practice is crucial to prevent spread of COVID-19 in long-term care (LTC) facilities
- This preparedness checklist consists of several elements that are crucial for preparing LTCF for COVID-19 which can be used by facility administrators, IPC focal points or staff, internal or external professionals.

WPRO | Checklist | 8 October 2020 | [Online link](#)

## Considerations in the investigation of cases and clusters of COVID-19

- An update to the interim guidance document entitled considerations in the investigation of cases and clusters of COVID-19 and offers guidance to local, regional, or national health authorities for rapid investigation of suspected COVID-19 cases and clusters.
- Outlines various considerations in the investigation of COVID-19 cases and clusters including the IPC measures for each intervention.

WHO | Interim guidance | 22 October 2020 | [Online link](#)

## Guidelines for the implementation of non-pharmaceutical interventions against COVID-19

- Non-pharmaceutical interventions (NPI) are the most effective public health interventions against COVID-19 till an effective and safe vaccine is available to protect those at risk of severe COVID-19.
- Detail available options for NPI in various epidemiologic scenarios, assess the evidence for their effectiveness and address implementation issues, including potential barriers and facilitators.

ECDC | Technical Report | 24 September 2020 | [Online link](#)

## MoHFW/Gol guidelines

### Preventive measures to contain spread of COVID-19 during festivities

- Provides guidance on steps to be taken before opening of the school, planning and scheduling of activities, availability and management of supplies, after opening of the schools, activities in common area – library, mess, canteen, common rooms, gymnasium, etc. and transportation to and from the institution.
- Includes hygiene and sanitation measures, management of suspect cases amongst student or staff.

MoHFW | SOP | 6 October 2020 | [Online link](#)

### Preventive measures to be followed in entertainment parks and similar places to contain spread of COVID-19

- Outlines generic and specific measures at entertainment parks and similar places to prevent spread of COVID-19, and promotes COVID-19 appropriate behaviour, protecting the vulnerable population, and providing and maintaining healthy environment at entertainment park and similar places.

- Planning is recommended for operations, scheduling, and monitoring of activities by promoting physical distancing, crowd management, ensuring ventilation, making available COVID related supplies, and creating awareness.

*MoHFW* | SOP | 8 October 2020 | [Online link](#)

## Guidelines for management of co-infection of COVID-19 with other seasonal epidemic prone diseases

- Provide clear guidance on prevention and management of co-infections of COVID with diseases like Dengue, Malaria, Seasonal Influenza (H1N1), Leptospirosis, Chikungunya etc.
- Salient features of common co-infections are tabulated for easier understanding.

*MoHFW* | Guidelines | 13 October 2020 | [Online link](#)

## Trainings / IEC resources

### Long-term care facilities in the context of COVID-19

- Concerted action is needed to mitigate the impact of COVID-19 by enhancing infection prevention and control (IPC) measures within long term care facilities (LTCF).
- Consists of 4 training modules to be used in conjunction with the LTCF [communication toolkit](#) and [preparedness checklist](#).

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

### Clinical management of patients with COVID-19 – general considerations

- Provides crucial knowledge necessary to provide safe, effective quality patient care. All aspects of clinical management, including facility preparation and surge planning; health worker infection prevention and control; interfacility transfer; etc. are covered.
- Also includes discussion of ethical issues during COVID-19 care, including the principles of allocating critical care resources.

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

## Antimicrobial Resistance and COVID-19

### Antimicrobial stewardship challenges and innovative initiatives in the acute hospital setting during the COVID-19 pandemic

- Healthcare professionals in Ireland involved in AMS programmes in the acute hospital setting were invited to participate in an electronic survey.
- Key challenges to AMS due to COVID-19 were mainly due to:
  - lack of resources as a result of re-allocation to COVID-19 planning and management;
  - difficulties posed by infection prevention and control (IPC) restrictions and social distancing in delivering ward rounds,
  - performing audits, providing education and holding committee meetings; and
  - increased use of AMs due to the difficulty in diagnosis of secondary infections, particularly in patients with severe COVID-19.

*Journal of Antimicrobial Chemotherapy* | Letter/article | 4 October 2020 | [Online link](#)

## The impact of the COVID-19 pandemic on healthcare acquired infections with multidrug resistant organisms

- This retrospective, cross-sectional study reviewed the prevalence of healthcare onset infections with multidrug resistant organisms including, methicillin-resistant staphylococcus aureus (MRSA), Extended Spectrum Beta-Lactamase (ESBL) and Vancomycin-resistant Enterococcus (VRE).
- COVID-19 pandemic increased awareness of basic infection control measures and subsequently reduced incidence of HAIs due to multidrug-resistant organisms in the hospitals under the study.

*American Journal of Infection Control* | Brief report | 1 October 2020 | [Online link](#)

## COVID-19: Clouds over the antimicrobial resistance landscape

- The article discusses COVID-19 pandemic and unexpected overuse of antibiotics, risks to vaccination efforts, and disruptions in microbiological surveillance and monitoring.
- Planning for contingencies, and avoiding infection by social distancing, adequate use of personal protection equipment and proper handwashing should be continued.

*Archives of Medical Research* | Research article | 10 October 2020 | [Online link](#)

## Etiology and antimicrobial resistance of secondary bacterial infections in patients hospitalized with COVID-19 in Wuhan, China: a retrospective analysis

- Electronic medical records of all patients hospitalized with COVID-19 in Wuhan Union Hospital between 27 January and 17 March 2020 were reviewed.
- Among 1495 patients hospitalized with COVID-19, 102 (6.8%) patients acquired secondary bacterial infections (SBIs), and almost half of them (49.0%, 50/102) died during hospitalization.
- Incidence of SBIs was associated with the severity of illness on admission and Gram-negative bacteria, especially *A. baumannii*, *K. pneumoniae*, and *S. maltophilia* were the top 3 bacteria with multidrug resistance.

*Antimicrobial Resistance & Infection Control* | Research | 22 September 2020 | [Online link](#)