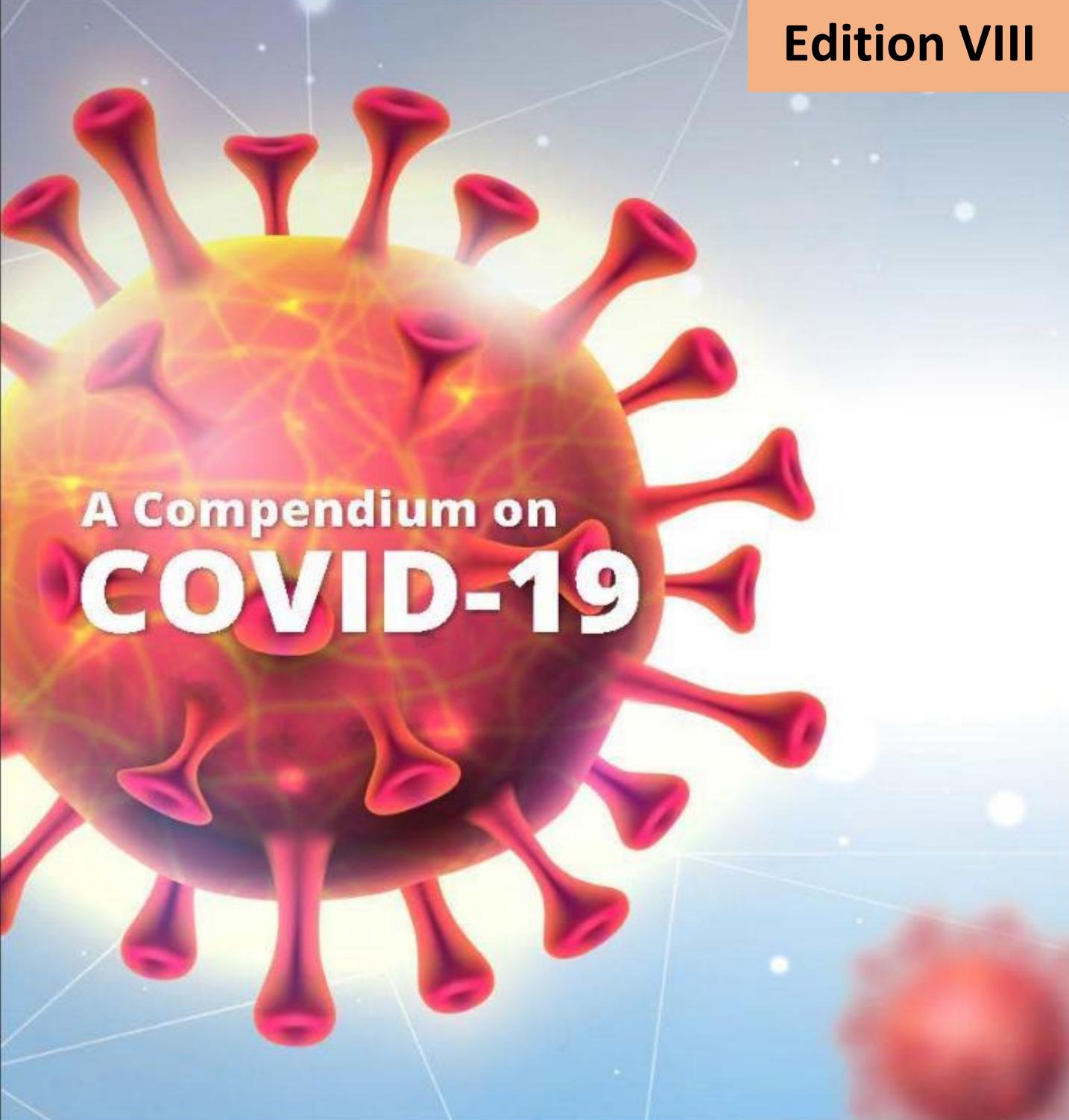


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## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>11</b>
<b>1.1.</b>	<b>Timeline of Pandemic</b>	<b>15</b>
<b>1.2.</b>	<b>Transmission</b>	<b>16</b>
1.2.1.	How does COVID-19 spread?	18
1.2.2.	Most infectious surfaces with a high risk of transmitting COVID-19	18
1.2.3.	How long human coronavirus stay on surfaces?	21
<b>1.3.</b>	<b>Symptoms</b>	<b>22</b>
<b>2</b>	<b>Covid-19 Status and Statistics</b>	<b>24</b>
<b>2.1</b>	<b>World</b>	<b>24</b>
<b>2.2</b>	<b>Fatality rates</b>	<b>24</b>
2.2.1	Comparison of fatality rates - World	24
2.2.2	Comparison of fatality rates - India	24
<b>2.3</b>	<b>India (Graph and Map)</b>	<b>25</b>
2.3.1	Top five Most Affected Countries	26
2.3.2	Countries with Lowest Number of Cases	27
<b>2.4</b>	<b>State and Union Territory</b>	<b>28</b>
2.4.1	State / Union territory with Highest Number of Cases	28
2.4.2	State / Union territory with Lowest Number of Cases	29
2.4.3	State Wise Fatality Rates	30
<b>3</b>	<b>Cure &amp; Treatment</b>	<b>31</b>
<b>3.1</b>	<b>COVID-19 Vaccines</b>	<b>31</b>
<b>3.2</b>	<b>COVID-19 Drugs</b>	<b>36</b>
3.2.1	Remdesivir	36
3.2.2	Hydroxychloroquine	37
3.2.3	Dexamethasone	38
3.2.4	Favipiravir	38
3.2.5	Itolizumab	39
3.2.6	Convalescent Plasma Therapy	39
3.2.7	Tocilizumab	40
<b>3.3</b>	<b>Healthcare infrastructure</b>	<b>40</b>
3.3.1	Designated COVID Hospitals	41
3.3.2	Designated COVID Hotels and Other Facilities	42
<b>3.4</b>	<b>Testing Strategy</b>	<b>42</b>
3.4.1	Types of COVID Tests	43

<b>3.5 Testing Collection and Facilities</b>	<b>43</b>
<b>4 Preventive and Safety Measures</b>	<b>45</b>
<b>4.1 Containment Zones</b>	<b>45</b>
<b>4.2 Isolation Duration and Precaution for Adults with COVID-19</b>	<b>45</b>
<b>4.3 Workplace</b>	<b>46</b>
<b>4.3.1 MoHFW</b>	<b>46</b>
<b>4.3.2 WHO Advisory</b>	<b>47</b>
<b>4.4 Preventive measure at School</b>	<b>48</b>
<b>4.4.1 MoHFW</b>	<b>48</b>
<b>4.5 Colleges and Universities</b>	<b>49</b>
<b>4.5.1 MOHFW</b>	<b>49</b>
<b>4.5.2 Considerations for Institutes of Higher education</b>	<b>49</b>
<b>4.5.3 Guidance for Administrators of Institutions of Higher Education</b>	<b>50</b>
<b>4.5.4 Testing in Institutions of Higher Educations</b>	<b>52</b>
<b>4.5.5 Guidance for Student Foreign Travel</b>	<b>52</b>
<b>4.6 Religious places</b>	<b>52</b>
<b>4.7 Hotels &amp; Restaurants</b>	<b>53</b>
<b>4.8 Shopping Malls</b>	<b>54</b>
<b>4.9 Gatherings and Community Events</b>	<b>55</b>
<b>4.10 Parks and recreational facilities</b>	<b>56</b>
<b>4.11 Shared housing and institutions</b>	<b>57</b>
<b>4.11.1 Encourage residents to take necessary preventive measures</b>	<b>57</b>
<b>4.11.2 Consideration of common spaces, to prevent the spread of COVID-19</b>	<b>57</b>
<b>4.11.3 Consideration for shared space</b>	<b>57</b>
<b>4.12 Basic Preventive Measures in Daily Life</b>	<b>58</b>
<b>4.12.1 Preventive Measures at Home</b>	<b>59</b>
<b>4.12.2 Errands &amp; Going Out</b>	<b>60</b>
<b>4.12.3 Caring for Children</b>	<b>60</b>
<b>4.12.4 Stress &amp; Coping</b>	<b>61</b>
<b>4.12.5 Funeral Guidance</b>	<b>62</b>
<b>4.12.6 Contact Tracing</b>	<b>62</b>
<b>4.13 Basic Preventive Measure at Residential Complexes</b>	<b>62</b>
<b>4.14 Basic preventive measure at yoga centers and gyms</b>	<b>62</b>
<b>4.15 Basic preventive measure at Market Places</b>	<b>63</b>
<b>5 Government Guidelines &amp; Regulations</b>	<b>64</b>
<b>5.1 Ministry of Health and Family Welfare (MoHFW)</b>	<b>64</b>

<b>5.1.1</b>	<b>Guidelines for Surveillance, containment and caution</b>	<b>64</b>
<b>5.1.2</b>	<b>Unlock Phase 5 Guidelines</b>	<b>64</b>
<b>5.1.3</b>	<b>State wise Guidelines</b>	<b>65</b>
<b>5.1.4</b>	<b>SOP for resumption of swimming training of sports persons in COVID-19 environment</b>	<b>65</b>
<b>5.1.5</b>	<b>SOP on preventive measures to be followed in Entertainment Parks and similar places to contain spread of COVID-19</b>	<b>65</b>
<b>5.1.6</b>	<b>SOP on preventive measures to contain the spread of COVID-19 during festivities</b>	<b>66</b>
<b>5.1.7</b>	<b>SOP on preventive measures in markets to contain spread of COVID-19</b>	<b>66</b>
<b>5.1.8</b>	<b>Guideline on managing mental illness in hospital settings during COVID-19</b>	<b>66</b>
<b>5.1.9</b>	Guidelines for management of co-infection of COVID-19 with other seasonal epidemic prone diseases.	66
<b>5.1.10</b>	Post COVID management protocol	66
<b>5.1.11</b>	Revised SOP on preventive measures to be followed while conducting examinations to contain spread of COVID19	66
<b>5.1.12</b>	SOP for partial reopening of Schools for students of 9th to 12th classes on a voluntary basis, for taking guidance from their teachers: In the context of COVID-19	67
<b>5.1.13</b>	SOP on preventive measures to contain spread of COVID-19 in skill or entrepreneurship training institutions, higher educational institutions conducting doctoral courses and post graduate studies in technical & professional programs requiring laboratory /experimental work	67
<b>5.1.14</b>	Advisory on Strategy for COVID-19 Testing in India.	67
<b>5.1.15</b>	FAQs on COVID-19 from AIIMS e-ICUs	67
<b>5.1.16</b>	Guidance on Bi-directional TB-COVID screening and screening of TB among ILI/ SARI cases	67
<b>5.1.17</b>	Clinical Guidance on Diabetes Management at COVID-19 Patient Management Facility	68
<b>5.1.18</b>	Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario	68
<b>5.1.19</b>	Guidance on Bi-directional TB-COVID screening and screening of TB among ILI/ SARI cases	68
<b>5.1.20</b>	Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario	68
<b>5.1.21</b>	Extension of Pradhan Mantri Garib Kalyan Package; insurance scheme for healthcare workers fighting COVID-19	69
<b>5.1.22</b>	Guidelines on Preventive Measure to Contain Spread of COVID-19 in Yoga Institutes & Gymnasiums	69
<b>5.1.23</b>	Revised guidelines for International arrivals	69
<b>5.1.24</b>	Advisory for Gated residential Complexes with regards to COVID-19	69
<b>5.1.25</b>	Guidelines for Gated Residential Complexes desirous of setting up Small COVID Care Facility by Residential Welfare Association / Residential Societies / Non-Government Organization (NGOs)	69
<b>5.1.26</b>	Guidance for General Medical and Specialized Mental Health Care Settings	69
<b>5.1.27</b>	Protocol on Clinical Management of COVID-19 patients	70
<b>5.1.28</b>	Guidelines for Home Isolation of Very Mild/ Pre-Symptomatic/ Asymptomatic COVID-19 Cases	70
<b>5.1.29</b>	Guidelines for Setting Up Isolation Facility/ Ward	70
<b>5.1.30</b>	Guidelines for Quarantine Facilities COVID-19	70
<b>5.1.31</b>	Guidelines for Blood Transfusion Services	70

5.1.32	Guidelines on Clinical Management Protocol for COVID-19 Patients	71
5.1.33	Guidelines on COVID Appropriate Behaviors	71
5.1.34	Advisory for Managing Healthcare Workers Working in COVID and Non-COVID Areas of the Hospitals	71
5.1.35	Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Hotels	71
5.1.36	Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Offices	71
5.1.37	Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Religious Places	71
5.1.38	Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Restaurants	72
5.1.39	Guidelines and SOPS on Preventive Measures to Contain Spread of COVID-19 in Shopping Malls	72
5.1.40	Guidelines for Safe ENT Practice in COVID-19	72
5.1.41	Advisory on Re-Processing and Re-Use of Eye Protection	73
5.1.42	Guidelines for Domestic Travel (Air/Train/Inter-State Bus Travel)	73
5.1.43	Guidelines on Provision of Reproductive, Material, Newborn, Child, Adolescent Health Plus Nutrition (RMNCAH+N) Services during and Post COVID-19 Pandemic	73
5.1.44	Guidelines on Preventive Measures to Contain Spread of COVID-19 in Workplace Settings	73
5.1.45	Guideline for RT-PCR based Pooled Sampling for Migrants/ Returnees from Abroad/ Green zones	74
5.1.46	Updated Additional Guidelines on Rational Use of Personal Protective Equipment	74
5.1.47	Updated Containment Plan for Large Outbreaks	74
5.1.48	Preparedness and Response to COVID-19 in Urban Settlements	74
5.1.49	Revised Guidelines for Home Isolation of Very Mild/Pre-Symptomatic/Asymptomatic COVID-19 Cases	74
5.1.50	Guidelines on Disinfection of Common Public Places Including Offices	75
5.1.51	Guidelines to be followed on Detection of Suspect/ Confirmed COVID-19 case in a Non COVID Health Facility	75
5.1.52	Guidelines for Notifying COVID-19 Affected Persons by Private Institutions	75
5.1.53	Additional Guidelines for Quarantine of Returnees from Abroad / Contacts / Isolation of Suspect or Confirmed Cases in Private Facilities	75
5.1.54	Guidelines for Home Quarantine	76
5.1.55	Guidance Document on Appropriate Management of Suspect/ Confirmed Cases of COVID-19: Railway Coaches as COVID-19 Care Centre	76
<b>5.2</b>	<b>Airport Authority of India</b>	<b>77</b>
5.2.1	State wise quarantine regulations for domestic passengers	77
<b>5.3</b>	<b>Delhi Metro Guidelines</b>	<b>77</b>
<b>5.4</b>	<b>Guidelines for Restarting Manufacturing Industries after Lockdown</b>	<b>79</b>
<b>5.5</b>	<b>Securities and Exchange Board of India (SEBI)</b>	<b>79</b>
5.5.1	Relaxation in timelines for compliance with regulatory requirements	79
5.5.2	Review of provisions regarding valuation of debt and money market instruments due to COVID-19 pandemic	79

5.5.3 Guidelines for Order-to-Trade Ratio (OTR) for Algorithmic Trading	79
5.5.4 Guidelines on Identification and Selection of Location as a Delivery Centre(s) for Commodity Derivatives Contract	79
5.5.5 Advisory on Disclosure of Material Impact of COVID-19 Pandemic on Listed Entities under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015('LODR Regulations' / 'LODR')	80
<b>5.6 Guidelines for Air Passengers</b>	<b>80</b>
<b>5.7 Ministry of Civil Aviation (MoCA) - Order</b>	<b>80</b>
5.7.1 RT-PCR testing at the entry airport for the arriving international transfer passengers	80
5.7.2 Recommencement of Domestic air travel w.e.f from 25 May 2020 - Updating of guidelines (meal services)	80
5.7.3 Recommencement of Domestic air travel w.e.f from 25 May 2020 - Updating of guidelines	81
5.7.4 Eligibility of Passengers to travel under Air Bubbles Arrangement	81
<b>5.8 Government of India (MyGov)</b>	<b>81</b>
5.8.1 Standard Operating Procedures (SOPs) For India Bound Passengers under 'Air Bubble'	84
<b>5.9 Others</b>	<b>84</b>
5.9.1 Guidelines for Inter-State Travel	84
5.9.2 Guidelines for International Arrival	84
5.9.3 SOP for Train Travel	84
<b>Annexure 'I'- Air India Evacuation Schedule Flights</b>	<b>85</b>
<b>Annexure 'II' - Important Websites &amp; Twitter Handles</b>	<b>86</b>
<b>Annexure 'III' - Forbes CoronaGuard</b>	<b>87</b>
<b>Annexure 'IV'- COVID-19 Information for US Citizens Entering or Departing India</b>	<b>89</b>
<b>Annexure 'V'- LG PuriCare Wearable Air Purifier face mask</b>	<b>90</b>

# Table of Figure

FIGURE 1: ABOUT CORONAVIRUS (COVID-19).....	13
FIGURE 2: NEW NORMAL ETIQUETTES TO COMBAT COVID-19.....	13
FIGURE 3: COVID-19 AVOID THREE C'S .....	14
FIGURE 4: HOW TO REMOVE MEDICAL MASK SAFELY .....	14
FIGURE 5: TIMELINE OF THE CORONAVIRUS PANDEMIC.....	15
FIGURE 6: COVID-19 TRANSMISSION FACTS ABOUT MOSQUITO BITES AND HOUSEFLIES .....	17
FIGURE 7: COVID-19 - TRANSMISSION & INFECTION.....	18
FIGURE 8: MOST INFECTIOUS SURFACES WITH A HIGH RISK OF TRANSMITTING COVID-19.....	19
FIGURE 9: RISK EXPOSURE – COIVD -19 TRANSMISSION .....	20
FIGURE 10: HOW LONG CORONAVIRUS STAYS ON SURFACE .....	21
FIGURE 11: WHAT DO YOU NEED TO KNOW ABOUT CORONAVIRUS .....	21
FIGURE 12: COMPARISON OF COVID WITH OTHER DISEASE .....	23
FIGURE 13:COMPARISON OF FATALITY RATES OF DIFFERENT COUNTRIES IN THE WORLD .....	24
FIGURE 14: COMPARISON OF FATALITY RATES OF DIFFERENT STATES/UTS IN INDIA .....	25
FIGURE 15: INDIA COVID-19 STATE WISE STATUS (AS OF 04 DECEMBER 2020).....	26
FIGURE 16: CONFIRMED AND DEATH CASES OF 5 TOPMOST Affected COUNTRIES .....	27
FIGURE 17: COUNTRIES WITH HIGHEST NUMBER OF CASES .....	27
FIGURE 18: COUNTRIES WITH LOWEST NUMBER OF CASES .....	28
FIGURE 19: COUNTRIES WITH LOWEST NUMBER OF CASES .....	28
FIGURE 20: STATE/UT WITH HIGHEST NUMBER OF CASES.....	28
FIGURE 21: STATES WITH HIGHEST NUMBER OF CASES .....	29
FIGURE 22: STATE/UT WITH LOWEST NUMBER OF CASES .....	29
FIGURE 23: STATES WITH LOWEST NUMBER OF CASES .....	29
FIGURE 24: ACTIVE AND DEATH CASES IN INDIA .....	30
FIGURE 25: COVID-19 VACCINE TRACKER (NUMBER OF VACCINES IN DIFFERENT STAGES) .....	32
FIGURE 26: TRACKING COVID-19 VACCINES (TOP TEN CONTENDERS) .....	33
FIGURE 27: OXFORD - ASTRAZENECA .....	33
FIGURE 28: PFIZER – BIONTECH .....	34
FIGURE 29: MODERNA .....	34
FIGURE 30: GAMALEYA INSTITUTE .....	35
FIGURE 31: KNOW THE FACTS ABOUT VACCINES AND MEDICAL PRODUCTS .....	35
FIGURE 32: WARNING ABOUT FALSIFIED MEDICAL PRODUCTS .....	36
FIGURE 33: DESIGNATED COVID HOSPITALS.....	42
FIGURE 34: TOTAL OPERATIONAL LABORATORIES REPORTING TO ICMR .....	44
FIGURE 35: BASIC PREVENTIVE MEASURES AT WORKPLACES AND OFFICES ETC.....	47
FIGURE 36: WAYS TO PREVENT COVID-19 IN WORKPLACE .....	48
FIGURE 37: GUIDELINES FOR SCHOOL REOPENING .....	49
FIGURE 38: PRECAUTIONARY MEASURE AT UPPER SECONDARY SCHOOL .....	50
FIGURE 39: WHEN THERE IS NO COMMUNITY TRANSMISSION IN IHE.....	51
FIGURE 40: WHEN THERE IS MINIMAL TO MODERATE COMMUNITY TRANSMISSION IN IHE .....	51
FIGURE 41: PREVENTIVE MEASURES AT RELIGIOUS PLACES .....	53
FIGURE 42: GENERIC PREVENTIVE MEASURES AT HOTELS AND RESTAURANTS .....	54
FIGURE 43: GENERIC PREVENTIVE MEASURES AT SHOPPING MALLS.....	55
FIGURE 44: BASIC PREVENTIVE MEASURE IN DAILY LIFE .....	58
FIGURE 45: IMPORTANT POINTS TO CONSIDER WHILE TAKING PREVENTIVE MEASURE AT HOME .....	60
FIGURE 46: EMOTIONAL CHALLENGES DURING COVID-19 PANDEMIC .....	61
FIGURE 47: PREVENTIVE MEASURES BEFORE OPENING AND AFTER OPENING THE YOGA INSTITUTES.....	63
FIGURE 48: UNLOCK 5.0 GUIDELINES.....	65
FIGURE 49: LIST OF HOTELS FOR QUARANTINE .....	76

FIGURE 50: GRADED RESUMPTION OF METRO LINES .....	78
FIGURE 51: GUIDELINES FOR OPERATING AIR COOLING AND AIR CONDITIONING EQUIPMENT .....	82
FIGURE 52: AC GUIDELINES FOR RESIDENCES, STANDALONE/WORKSPACES/OFFICES .....	82
FIGURE 53: AC GUIDELINES FOR MEETING ROOMS, DISPENSARIES ETC .....	83
FIGURE 54: AC GUIDELINES FOR INSTITUTION ETC. ....	83
FIGURE 55: AC GUIDELINES FOR HOSPITALS, ISOLATION WARDS ETC .....	84
FIGURE 56: EUREKA FORBES CORONA GUARD .....	87
FIGURE 57: TECHNICAL SPECIFICATIONS OF FORBES CORONA GUARD .....	88
FIGURE 58: LG PURICARE WEARABLE AIR PURIFIER MASK.....	90

# Glossary of Terms

Name	Abbreviation
All India Institute of Medical Science	AIIMS
Australian Center for Disease preparedness	ACDP
Indian Council of Medical Research	ICMR
Building and Other Construction Workers	BoCW
Confederation of Indian Industry	CII
Coronavirus Disease / 2019 Novel Coronavirus	COVID-19
Centers for Disease Control and Prevention	CDC
Employee Provident Fund Organization	EPFO
Employee State Insurance Corporation	ESIC
Emergency Medical Teams	EMTs
Federation of Indian Chambers of Commerce & Industry	FICCI
Government of India	GoI
Institutes oh Higher Studies	IHE
Ministry of Health and Family Welfare	MoHFW
Ministry of Home Affairs	MHA
Ministry of Labour and Employment	MoLE
Ministry of Finance	MoF
Reserve Bank of India	RBI
Middle East Respiratory Syndrome	MERS
National Housing Bank	NHB
National Centre for Disease Control	NCDC
Original Equipment Manufacture	OEM
Public Health Emergency of International Concerns	PHEIC
Personal Protective Equipment	PPE
Severe Acute Respiratory Syndrome	SARS
Sports Authority of India	SAI
Targeted Long-Term Repo Operations	TLTRO
Voice over Internet Protocol	VoIP
World Health Organisation	WHO

# 1 Introduction

In the previous Editions we have given an overview of coronavirus, its symptoms, where it originated, etc. In this edition - Edition VIII, we have kept the relevant information (sometimes at the cost of repetition), such that one does not have to open two documents at a given time.

The COVID-19 pandemic has spread with shocking speed to every part of the world and infected millions. We are seeing the second wave spread in most of the countries. The COVID-19 pandemic is one of the most significant events of this century, with far reaching consequences. Almost every country has been affected by the devastating Coronavirus disease (COVID-19). The viral infection, which has its origin in the city of Wuhan in China, has today infected over 61.8<sup>1</sup> million people worldwide, and over 1.40 million people have lost their lives across the globe. In the US, 2,71,233 people have lost their lives due to the infection. In India<sup>2</sup>, the total active cases of COVID-19 now stands at 4,16,082 and more than 1,39,188 people have lost their lives. But the good thing is that the national recovery<sup>3</sup> rate has further improved to 94.11%. It is being compared to the two world wars and to the great depression, but the last time the entire world went through something like this was 100 years ago during the Spanish Flu pandemic. Nobody is sure how the coronavirus pandemic will end. Medical experts and researchers have joined hands across the globe to develop a cure or vaccine to contain this highly infectious virus. Britain<sup>4</sup> has become the first country in the world to approve the Pfizer-BioNTech coronavirus vaccine for public use. The vaccine will be made available across UK from second week of Dec 2020. A vaccine, namely Sputnik V, formerly known as Gam-COVID-Vac, has been developed by the Gamaleya Research Institute in Moscow, and has been approved by the Ministry of Health of the Russian Federation on 11 August 2020. Also, the vaccine candidate 'CoronaVac' was approved in July for emergency use in China to vaccinate high-risk groups such as medical staff, but it might take some more time before the world eventually gets its first shot against COVID-19. Our clinics and hospitals are taking every precaution available to ensure patients are safe from COVID-19.

The health and human toll, related directly or indirectly to COVID-19, is already large and continues to grow, with hundreds of thousands of deaths and many more suffering and disrupted livelihoods. Even after taking various mitigation measures—such as lockdowns, closure of schools and non-essential business, and travel restrictions the effect of COVID-19 has been debilitating in regard to human lives as well as economies. This has led to multiple disruptions in local and global supply chains - for essential and non-essential items, loss of business revenues, lack of opportunities etc. The pandemic represents the largest economic shock the world economy has witnessed in decades, causing a collapse in global activity. The spread of the pandemic has essentially halted international travel and disrupted global value chains, resulting in a sharp contraction in global trade. All of us are looking forward to moving back to our normal lives but with the vaccine months away, living with it might be the new normal where things are not going to be the same as they were before. The pandemic has changed how we work, learn and interact, as social distancing guidelines have led to a more virtual existence, both personally and professionally. With the increasing stress on social distancing and other safety measures, what

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<sup>1</sup> <https://covid19.who.int/>

<sup>2</sup> <https://www.mohfw.gov.in/>

<sup>3</sup> <https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/12/2020120467.pdf>

<sup>4</sup> <https://www.timesnownews.com/health/article/uk-approves-pfizer-biontech-coronavirus-vaccine-for-use-first-in-the-world/689410>

we took for granted might be gone forever. Many weddings, sporting events or concerts would be ruled out. Office meetings, schools and colleges, conferences, parent-teacher meetings will take place in the virtual world. Shopping is mostly being done online. It has also changed the way people meet and interact, conduct business and buy essentials. It is critical that the new normal and culture is adopted for effective containment of the infection. We have to let go of our old normal and settle into what seems to be our new normal. So, what does a new normal look like? Here are some thoughts (and realities) given below, with tips on how to adjust to the new normal.

#### **The way we live is different: -**

- I. **Wear Masks and gloves**, wherever you may be in the world.
- II. **Queuing is now the norm**, be it when visiting health professionals, going to the shops, or even getting in a lift, while maintaining social distance.
- III. **Public transport looks very different**, with social distancing in place and commuters wearing masks and gloves.
- IV. **We do a double-take** when we hear someone cough, sneeze, or sniffle.

#### **The way we work, or study has changed: -**

- I. **Education as we know it has changed**. Schools and universities have moved online, some blending face-to-face with online lectures. Universities around the world are feeling the impact from the absence of International Students. Conferences have been paused, and international collaborations now look very different to previous years.
- II. **Work has also change due to social distancing**. So many of us have shifted to working from home to minimise travelling on public transport and gathering in groups at the office. Online video meetings have become our new normal.

#### **The way we socialise and connect looks very different: -**

- I. **Social distancing**. No more large gathering. We have said goodbye (for now) to attending concerts, plays, movies, festivals, museums, etc., but hopefully we would be able to return to them soon.
- II. **No visits from loved ones from interstate or overseas**. With travel restrictions in place and unlikely to lift for the foreseeable future (particularly international travel), families and loved ones are being kept apart and are having to make do with online catch ups.
- III. **Social greetings have transformed**. Gone are the days of greeting friends and extended relatives with handshakes, hugs etc. Friendly gestures like these are now being controlled, and replaced by elbow bumps and foot-shakes, or waves from a (social) distance and not to forget the good old namaste is back in vogue.

## What you need to know about coronavirus (COVID-19)



The virus usually spreads from **CLOSE PERSON-TO-PERSON CONTACT** through respiratory droplets from coughing or sneezing.

### SYMPTOMS OF COVID-19 INCLUDE.



**COUGH**



**FEVER**



**SHORTNESS OF BREATH**



**SYMPTOMS MAY DEVELOP WITHIN 14 DAYS OF EXPOSURE** to the illness.



Wash your hands frequently using soap and water for at least 20 seconds. Use alcohol based hand sanitizer if soap and water aren't available.



Cough or sneeze into a tissue or flexed elbow, then throw the tissue in the trash.



Avoid touching your eyes, nose or mouth with unwashed hands.



Avoid close contact with people who are sick, sneezing or coughing.



Stay home when you are sick.



Clean or disinfect surfaces or objects people frequently touch.



Only wear a face mask if you have respiratory symptoms or are caring for someone with respiratory symptoms or while going out.

Figure 1: About Coronavirus (COVID-19)

## The New Normal :- The way we live is different



**Wear Masks and gloves**



**Education as we know it has change**



**Public transport looks very different,**



**Social greetings have transformed**



**Work has also change due to social distancing.**



**Queuing is now the norm**

Figure 2: New normal etiquettes to combat COVID-19

## Coronavirus COVID-19

## Avoid the Three Cs:

**There are certain places where COVID-19 spreads more easily:-**

**1**



**Crowded places**

With many people nearby

**2**



**Close – contact settings**  
Especially where people have close –range conversations

**3**



**Confined and enclosed spaces**

With poor ventilation

**The risk of infection and outbreaks increases when the 3 C's overlap.**

Figure 3: Covid-19 Avoid Three C's



## How to Remove Medical Mask

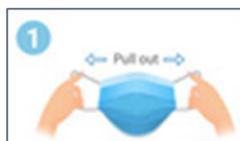


Figure 4: How to Remove Medical Mask Safely

## 1.1. Timeline of Pandemic<sup>5</sup>

The coronavirus disease (COVID-19) is understood to have surfaced in a Chinese seafood and poultry market (Wuhan City) in Dec 2019, which has spread to at least 216 countries. The World Health Organization (WHO) declared the SARS COV-2 coronavirus outbreak a pandemic on March 11, 2020. A brief timeline of the outbreak of the disease is depicted below: -

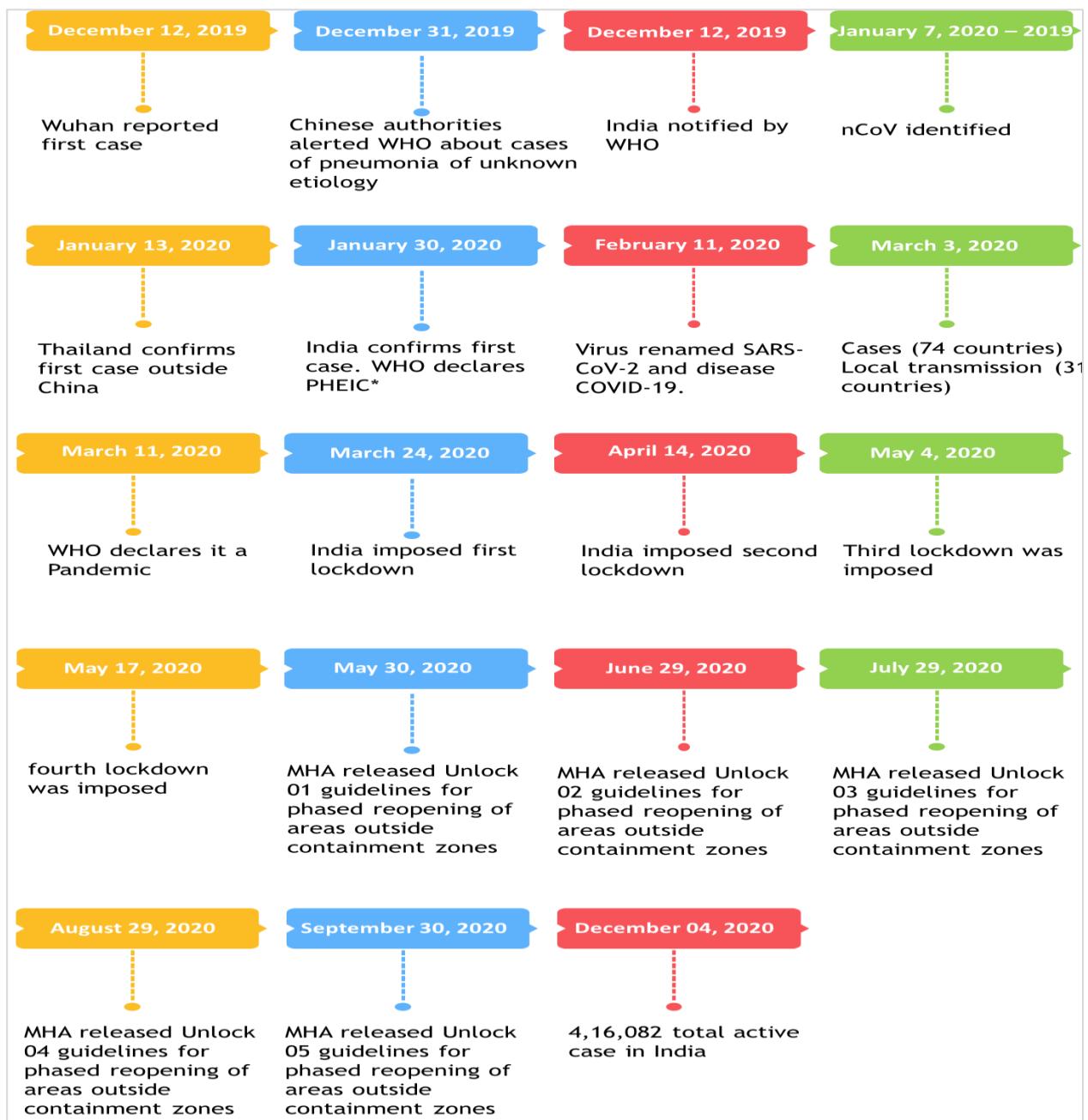


Figure 5: Timeline of the Coronavirus Pandemic

<sup>5</sup> <https://www.who.int/news-room/detail/27-04-2020-who-timeline---covid-19>, <https://www.mohfw.gov.in/>, <https://covid19.who.int/region/amro/country/us>

## 1.2. Transmission

It's almost a year living with COVID-19 and the information that we have been gathered about the virus has become clearer and more authentic with time. It has now been observed that the virus does not spread easily from a contaminated surface and from animals<sup>6</sup> as it was thought to do so earlier.

People should adopt preventive measure like social distancing, use of mask and PPE, good respiratory hygiene etc. for prevention. In India, the government<sup>7</sup> has warned all the States and Union Territories against the use of N-95 masks with valve respirator as it does not prevent virus from escaping out of the mask.

In recent studies the US<sup>8</sup> Centers for Disease Control and Prevention has stated that our skin can act as the biggest carrier of the coronavirus. The survival time of the coronavirus depends on the temperature of the body. Lower the temperature longer the survival. Australian<sup>9</sup> Center for Disease preparedness (ACDP), has also stated the same and further added that this virus stayed longer on paper banknotes than plastic banknotes.

Recently many new and different types of transmission cases have been reported. In Hong Kong<sup>10</sup>, a bathroom was found to be contaminated with coronavirus, which was directly above the house whose inhabitants had been confirmed to be infected with COVID-19 and it was surmised that the virus had passed up to the bathroom through the drainpipes. In<sup>11</sup> a recent interview the Director of the Indian Institute of Public Health has stated that on the basis of the study conducted by them only 10%-20% of households living with a COVID-19 infected person get infected, rest 80%-90% do not.

Another<sup>12</sup> study shows that this virus dies at room temperature within 24 hours. Scientists also confirmed that boiling the water kills COVID-19 immediately and chlorinated water is also effective in killing this virus.

A team of researchers<sup>13</sup> from Leumit Health Services (LHS) and Azrieli Faculty of Medicine, have found connection between low level of vitamin D and the development of coronavirus which has been published in the FEBS Journal. The researchers were looking for connection between low plasma Vitamin D level and the likelihood of the COVID-19 infection. The details can be accessed at the following link <https://www.firstpost.com/health/link-between-low-vitamin-d-levels-high-covid-19-infection-risk-established-by-israeli-researchers-8643851.html>. In another study it was found that the COVID patient with blood group O are less likely to get infected from COVID-19 whereas A and AB are most vulnerable to it and these groups have shown similar rate of infection. The details can be accessed at the link given below<sup>14</sup>.

<sup>6</sup> <https://www.washingtonpost.com/health/2020/05/21/virus-does-not-spread-easily-contaminated-surfaces-or-animals-revised-cdc-website-states/>

<sup>7</sup> <https://m.dailhunt.in/news/india/english/the%20new%20indian%20express-epaper-newexpress/covid19%20government%20warns%20against%20use%20of%20n95%20masks%20with%20valved%20respirator-newsid-n200215774?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

<sup>8</sup> <https://m.dailhunt.in/news/india/english/news18+english-epaper-newseigh/for+how+long+can+the+coronavirus+stay+active+on+your+skin+and+other+surfaces-newsid-n220053026?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

<sup>9</sup> <https://m.dailhunt.in/news/india/english/latestly-epaper-lateng/covid19+virus+can+survive+on+phone+screens+and+banknotes+for+4+weeks+study-newsid-n221239046?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

<sup>10</sup> <https://www.ndtv.com/world-news/coronavirus-in-vacant-apartment-in-china-suggests-spread-through-toilets-2286035?amp=1&akamai-rum=off#referrer=https%3A%2F%2Fwww.google.com&tf=From%20%251%24s>

<sup>11</sup> <https://thewire.in/health/watch-karan-thapar-interview-covid-19-dileep-mavalankar>

<sup>12</sup> <https://www.livemint.com/news/world/scientists-figure-out-a-weakness-of-coronavirus-ordinary-water-11596276025946.html>

<sup>13</sup> <https://www.firstpost.com/health/link-between-low-vitamin-d-levels-high-covid-19-infection-risk-established-by-israeli-researchers-8643851.html>

<sup>14</sup> <https://www.thehindubusinessline.com/news/science/blood-type-o-least-vulnerable-to-covid-a-and-ab-at-most-risk-study/article32859423.ece>

<https://www.thehindubusinessline.com/news/science/blood-type-o-least-vulnerable-to-covid-a-and-ab-at-most-risk-study/article32859423.ece>

<https://m.dailyhunt.in/news/india/english/timesnownews+english-epaper-tnneng/people+with+this+blood+group+may+be+less+vulnerable+to+covid19+infection-newsid-n222348996?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

University of Georgia's latest study suggests evidence of airborne transmission of COVID-19 in enclosed spaces. The researchers were able to link a community outbreak of COVID-19 in China to a source patient who likely spread the virus to fellow bus riders through the bus's air conditioning system.<sup>15</sup>

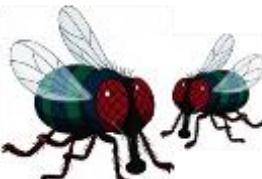
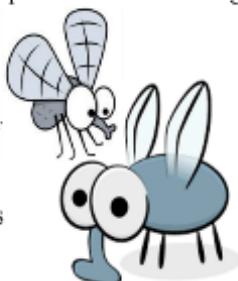
<h2>COVID-19 Coronavirus</h2> <p><b>FACT:</b>  coronavirus <b>CANNOT</b> be transmitted through houseflies</p> <p>To date, there is no evidence or information to suggest that the COVID-19 virus transmitted through houseflies.</p> <p>The virus that cause COVID-19 spreads primarily through droplets generated when an infected person coughs, sneezes or speaks. You can also become infected by touching a contaminated surface and then touching your eyes, nose or mouth before washing your hands.</p> <p></p> <p>To protect yourself, keep at least 1-metre distance from others and disinfect frequently-touched surfaces. Clean your hands thoroughly and often and avoid touching your eyes, mouth and nose.</p>	<h2>COVID-19 Coronavirus</h2> <p><b>FACT:</b>  The new coronavirus <b>CANNOT</b> be transmitted through mosquito bites</p> <p>To date there has been no information nor evidence to suggest that the new coronavirus could be transmitted by mosquitoes.</p> <p>The new coronavirus is a respiratory virus which spreads primarily through droplets generated when an infected person coughs or sneezes, or through droplets of saliva or discharge from the nose.</p> <p></p> <p>To protect yourself, clean your hands frequently with an alcohol-based hand rub or wash them with soap and water. Also, avoid close contact with anyone who is coughing and sneezing.</p>
--	--

Figure 6: COVID-19 transmission facts about mosquito bites and houseflies

<sup>15</sup> <https://www.hindustantimes.com/health/study-supports-airborne-spread-of-covid-19-indoors/story-G9d0AuheDobAZYRPJabVJJ.html>

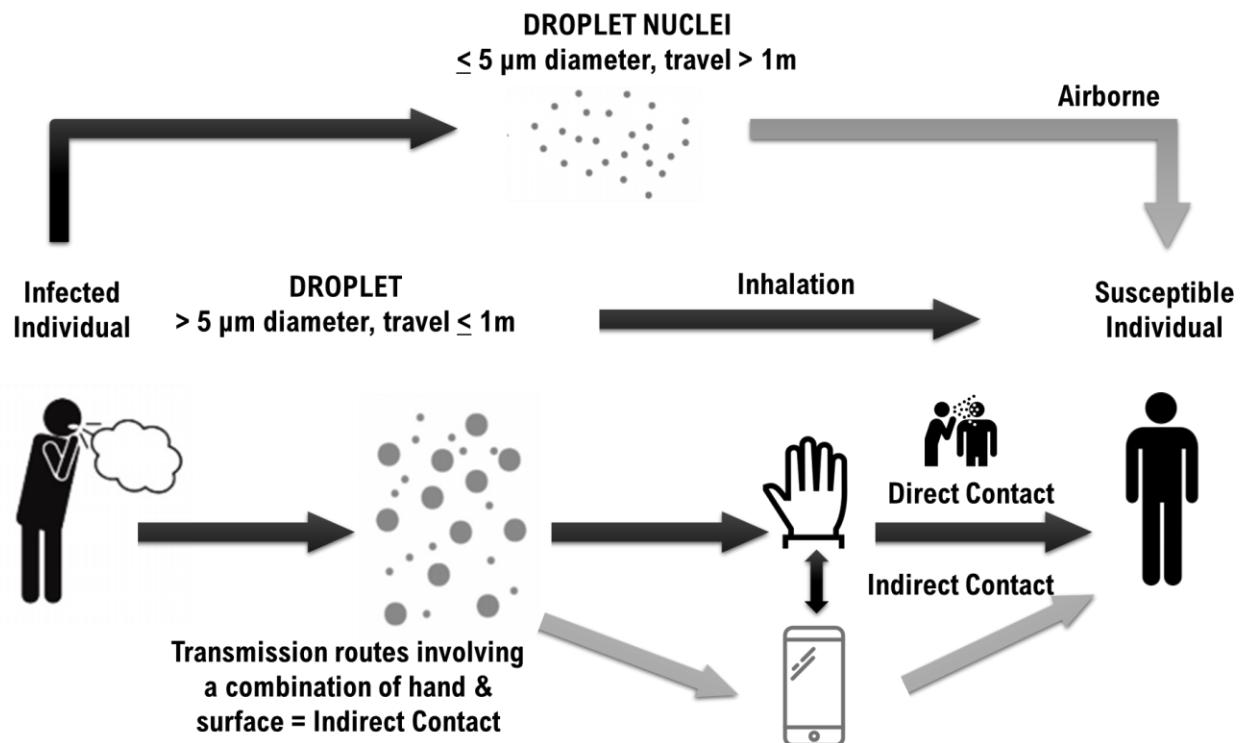


Figure 7: COVID-19 - Transmission & Infection

### 1.2.1. How does COVID-19 spread?

The spread of COVID-19 from person to person is being driven by droplet transmission. The virus is carried in small droplets that emerge from the nose or mouth, when a person with COVID-19 speaks, coughs or sneezes. Infection can also happen when a person touches a surface or an object that has the virus on it, then touches their eyes, nose, and/ or mouth. Coronavirus risk levels are tabulated and placed at figure 9. They are to be used for reference without undue weightage being given to them, as risks associated to each situation depends a lot on the prevalent circumstances, which could among others include, whether you are wearing a mask, your co-morbidities etc.

### 1.2.2. Most infectious surfaces with a high risk of transmitting COVID-19

There are some surfaces which carry a higher COVID transmission risk than others, according to a new study. Be it indoors or outdoors, there is no place 'too safe' from COVID risk. New research and studies have just proven how fast and easily COVID-19 can spread from one surface onto another.

- I. Windows on a public transport vehicle
- II. Currency notes
- III. Cell phone screens
- IV. Hospital waiting rooms
- V. ATM screen and buttons
- VI. Stainless steel appliances in the kitchen

## Most infectious surfaces with a high risk of transmitting COVID-19

COVID-19 spreads primarily from person to person



- Droplets releases when someone sick sneezes or coughs can land on the mouths or noses of people nearby
- Close contact with someone sick – like hugging or shaking hands



COVID-19 mainly spreads from person to person...but it can also be left on objects and surfaces...



Windows on a public transport vehicle



Currency notes



Cell phone screens



Hospital waiting rooms



ATM screen and buttons



Stainless steel appliances in the kitchen

**So if you touch something contaminated and then touch your face or another's face, you might all fall ill.**

Figure 8: Most infectious surfaces with a high risk of transmitting COVID-19

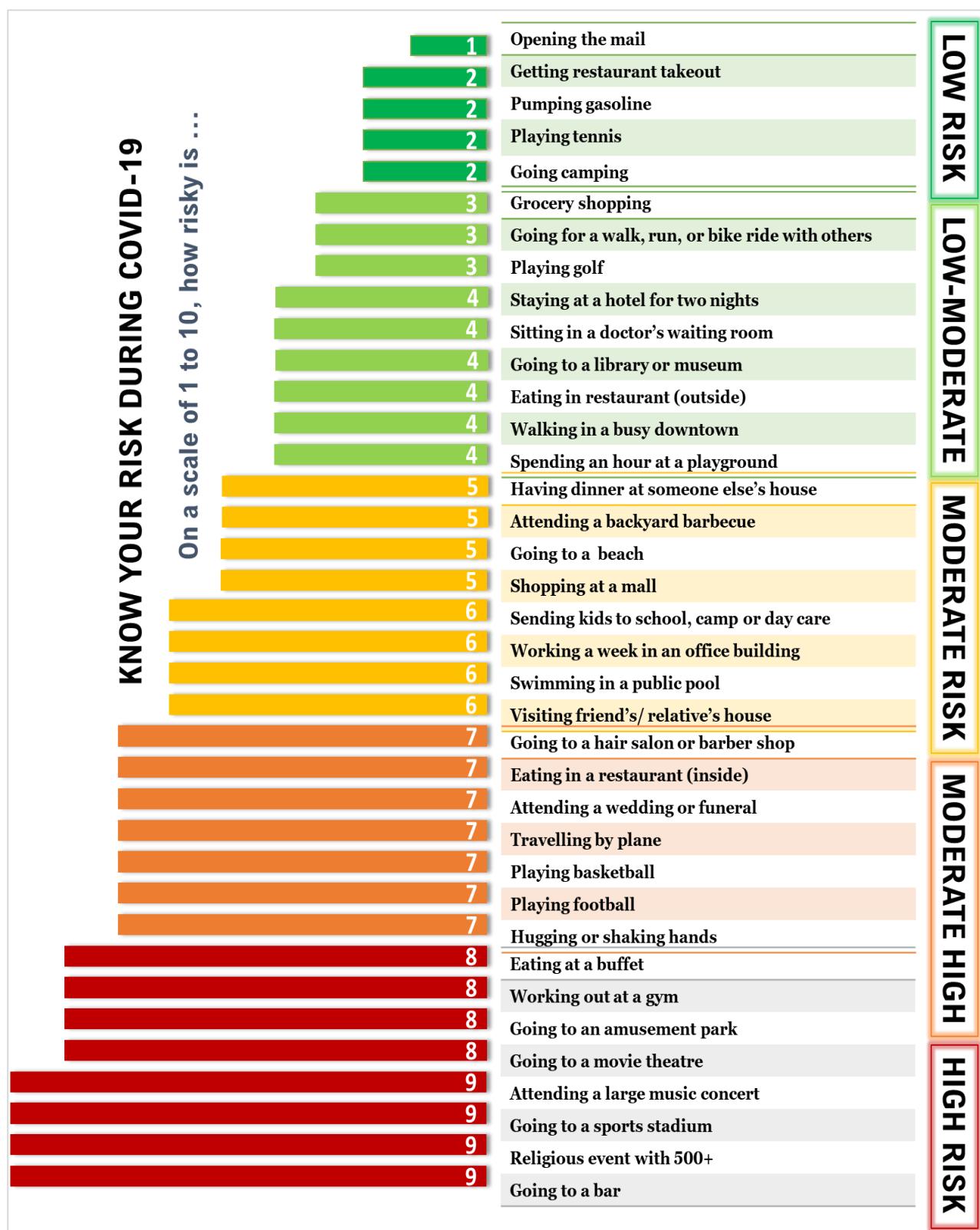


Figure 9: Risk Exposure - COIVD -19 Transmission

Reference: <https://www.sabahoutbreak.com/newsDetail.cfm?Show=786>

### 1.2.3. How long human coronavirus stay on surfaces?<sup>16</sup>

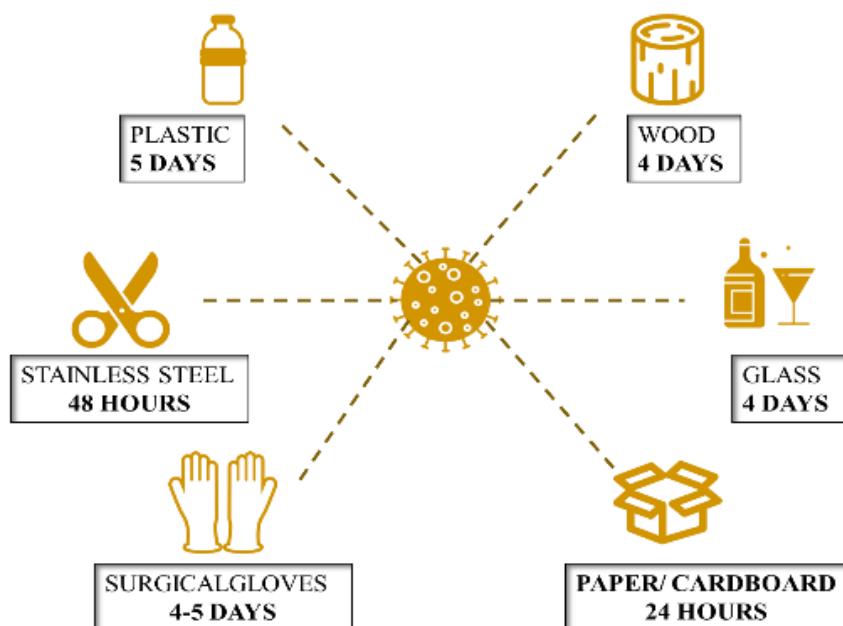
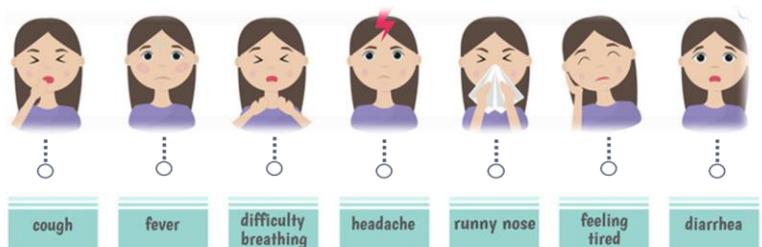


Figure 10: How long Coronavirus stays on surface

**To stop the spread of COVID-19, we all need to play our part.**

**SYMPTOMS**



cough	fever	difficulty breathing	headache	runny nose	feeling tired	diarrhea
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**PREVENTION COVID-19**



**How is it transmitted?**

- Through close contact with an infected person
- By an infected person coughing or sneezing
- By touching contaminated objects or surfaces and then touching your mouth, nose or eyes

**Who is most at risk of becoming seriously ill?**

- People over age 60
- People with pre-existing conditions such as diabetes and heart disease

Figure 11: What Do You Need to Know About Coronavirus

<sup>16</sup> [https://www.who.int/docs/default-source/coronavirus/risk-comms-updates/update-21-epi-win-covid-19-transmission-q-a.pdf?sfvrsn=796a4b2b\\_2](https://www.who.int/docs/default-source/coronavirus/risk-comms-updates/update-21-epi-win-covid-19-transmission-q-a.pdf?sfvrsn=796a4b2b_2)

### 1.3. Symptoms

People who have been infected with COVID-19 have been found to show different symptoms. We have already included the detail in our previous editions. As per the new research<sup>17</sup>, CDC has updated its list of symptoms. According to them nausea, congestion or running nose and diarrhea is also a symptom of COVID-19. The link to WHO website giving the symptoms can be accessed here - [https://www.who.int/health-topics/coronavirus#tab=tab\\_3](https://www.who.int/health-topics/coronavirus#tab=tab_3)

Amid this COVID<sup>18</sup> pandemic doctors have recommended flu shots for people of all ages and groups. It is not a protection against COVID, but it will reduce illness from the disease caused by influenza viruses. In this situation it has become important to prevent from other respiratory illness taking place.

According<sup>19</sup> to the research presented by Luigi Gennari, MD, PhD it was found that the people who died due to COVID-19 had low vitamin D levels. There is a relation between Vitamin D level and COVID-19 mortality, and it is recommended that optimum levels of Vitamin D is maintained. It is cautioned that excess of Vitamin D<sub>3</sub> is poisonous to human beings, and hence one is cautioned from taking an overdose of Vit D3.

COVID-19 symptoms are depicted below: -

<sup>17</sup> <https://m.dailymotion.in/news/india/english/hindustan%20times-epaper-hindustantimes/top%20us%20health%20body%20adds%203%20new%20symptoms%20of%20covid19-newsid-n194442866?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

<sup>18</sup> [https://m.timesofindia.com/india/not-a-covid-shield-but-flu-shot-can-help-docs/amp\\_articleshow/77474643.cms](https://m.timesofindia.com/india/not-a-covid-shield-but-flu-shot-can-help-docs/amp_articleshow/77474643.cms)

<sup>19</sup> <https://www.healio.com/news/endocrinology/20200911/low-vitamin-d-levels-independently-associated-with-severe-covid19-cases-death>



SYMPTOMS	COVID-19	FLU	COMMON COLD	MALARIA	DENGUE	ALLERGIES
FEVER	COMMON	COMMON	RARE	COMMON	COMMON	RARE
DRY COUGH	COMMON	LESS COMMON	LESS COMMON	RARE	RARE	LESS COMMON
TIREDNESS	COMMON	COMMON	LESS COMMON	COMMON	COMMON	LESS COMMON
SHORTNESS OF BREATH	LESS COMMON	LESS COMMON	RARE	RARE	LESS COMMON	LESS COMMON
ACHES AND PAINS	LESS COMMON	COMMON	RARE	LESS COMMON	COMMON	RARE
HEADACHE	LESS COMMON	COMMON	RARE	COMMON	COMMON	LESS COMMON
SORE THROAT	LESS COMMON	LESS COMMON	COMMON	RARE	RARE	RARE
DIARRHEA	LESS COMMON	LESS COMMON	RARE	COMMON	RARE	RARE
STUFFY NOSE	RARE	LESS COMMON	COMMON	RARE	RARE	COMMON
RUNNING NOSE	RARE	COMMON	COMMON	RARE	LESS COMMON	COMMON
SNEEZING	RARE	RARE	COMMON	RARE	RARE	COMMON

Figure 12: Comparison of COVID with other Disease

## 2 Covid-19 Status and Statistics

### 2.1 World<sup>20</sup>

As on 29 November 2020, India, the United States of America, Russian Federation, France and Brazil, are the countries which have reported the highest number of cases. Where the highest number of cases were the United States of America (over 1.1 million cases, a 0.3% increase from the previous week), India (over 297 000 cases, a 6% increase), Brazil (over 218 000 new cases, a 4% increase), Italy (over 184 000 new cases, a 22% decrease) and Russian Federation (over 179 000 new cases, a 10% increase). The world has witnessed 61.8 million cases and over 1.4 million deaths reported globally since the start of the pandemic. The Region of the Americas is the largest contributor for new weekly cases previous week.

### 2.2 Fatality rates

#### 2.2.1 Comparison of fatality rates - World<sup>21</sup>

India has a fatality rate of 1.5% which is among the lowest in the world, whereas Yemen has 27.9 % which is highest in the world. A comparison of the top ten countries with highest fatality rate is tabulated below: -

(As of 04 December 2020)

S. No	Country	Total Deaths	Fatality rates (%)	Deaths/100K Population
1	Yemen	624	27.9	2.19
2	Mexico	108173	9.5	85.72
3	Ecuador	13612	6.9	79.68
4	Sudan	1271	6.9	3.04
5	Bolivia	8982	6.2	76.11
6	Chad	102	6.0	0.66
7	Egypt	6713	5.7	6.82
8	Syria	432	5.3	2.56
9	China	4745	5.1	0.34
10	Liberia	83	5.0	1.72

Figure 13:Comparison of fatality rates of different countries in the world

#### 2.2.2 Comparison of fatality rates - India<sup>22</sup>

According to a report of the Union Health Ministry, out<sup>23</sup> of the total active coronavirus cases reported in India, 0.45% patients are on ventilators, 2.73% patients need ICU support and, 4.09%

<sup>20</sup> file:///C:/Users/Anisha%20Malik/Downloads/20201201\_Weekly\_Epi\_Update\_16%20(2).pdf

<sup>21</sup> <https://coronavirus.jhu.edu/data/mortality>

<sup>22</sup> <https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/12/2020120467.pdf>

<sup>23</sup> [https://www.business-standard.com/article/current-affairs/coronavirus-india-dispatch-only-0-45-of-covid-19-patients-on-ventilator-120111201071\\_1.html](https://www.business-standard.com/article/current-affairs/coronavirus-india-dispatch-only-0-45-of-covid-19-patients-on-ventilator-120111201071_1.html)

are on oxygen support. This means around 6-7% of the total active Covid-19 cases are serious enough to be put on oxygen therapy. Low fatality rate has encouraged government to avoid lockdown. The States fatality rate as tabulated below: -

(As of 03 December 2020)

S. No	States/UT	Fatality rates (%)
1	Punjab	3.2
2	Maharashtra	2.6
3	Gujarat	1.9
4	West Bengal	1.7
5	Delhi	1.6
6	Madhya Pradesh	1.6
7	Jammu & Kashmir	1.5
8	Tamil Nadu	1.5
9	Uttar Pradesh	1.4
10	Karnataka	1.3
11	Chhattisgarh	1.2
12	Haryana	1.0
13	Jharkhand	0.9
14	Rajasthan	0.9

Figure 14: Comparison of fatality rates of different states/UTs in India

### 2.3 India (Graph and Map)<sup>24</sup>

According to the Ministry of Health and Family Welfare (MoHFW), as of 04 December 2020 2020, a total of 416,082 active COVID-19 cases have been reported in 35 States/ Union territories making India the third worst affected country in the world. Despite the rise in the cases, the mortality rate<sup>25</sup> in India is set to fall below 1.58% and is also a lot more gradual when compared to many other nations devastated by the disease and concurrently the recovery rate has increased to 94.11%.

**India COVID-19 State wise status (As of 04 December 2020)<sup>26</sup>**

S. No	Name of State / UT	Active Cases	Cured/Discharged/Migrated	Deaths
1	Andaman and Nicobar Islands	71	4597	61
2	Andhra Pradesh	6742	856320	7014
3	Arunachal Pradesh	769	15525	54
4	Assam	3505	208846	985
5	Bihar	5890	229249	1281

<sup>24</sup><https://www.mohfw.gov.in/>

<sup>25</sup><https://coronavirus.jhu.edu/data/mortality>

<sup>26</sup><https://www.mohfw.gov.in/>

<b>6</b>	Chandigarh	981	16452	284
<b>7</b>	Chhattisgarh	19300	220177	2941
<b>8</b>	Dadra and Nagar Haveli and Daman and Diu	14	3324	2
<b>9</b>	Delhi	29120	543514	9424
<b>10</b>	Goa	1418	46251	696
<b>11</b>	Gujarat	14913	195365	4031
<b>12</b>	Haryana	15516	221203	2520
<b>13</b>	Himachal Pradesh	8088	33914	695
<b>14</b>	Jammu and Kashmir	5104	104890	1718
<b>15</b>	Jharkhand	1926	106868	977
<b>16</b>	Karnataka	24708	852584	11821
<b>17</b>	Kerala	61342	556378	2329
<b>18</b>	Ladakh	859	7713	119
<b>19</b>	Madhya Pradesh	13887	193187	3300
<b>20</b>	Maharashtra	86612	1703274	47472
<b>21</b>	Manipur	3070	22172	294
<b>22</b>	Meghalaya	648	11241	116
<b>23</b>	Mizoram	235	3647	6
<b>24</b>	Nagaland	699	10520	64
<b>25</b>	Odisha	4239	314023	1755
<b>26</b>	Puducherry	444	36062	613
<b>27</b>	Punjab	7724	141478	4862
<b>28</b>	Rajasthan	25544	246572	2370
<b>29</b>	Sikkim	320	4669	111
<b>30</b>	Tamil Nadu	10988	763428	11747
<b>31</b>	Telangana	8826	261830	1467
<b>32</b>	Tripura	517	31947	372
<b>33</b>	Uttarakhand	4967	70045	1263
<b>34</b>	Uttar Pradesh	22990	518390	7848
<b>35</b>	West Bengal	24106	460634	8576
	<b>Total</b>	<b>4,16,082</b>	<b>90,16,289</b>	<b>1,39,188</b>

Figure 15: India COVID-19 State wise status (As of 04 December 2020)

### 2.3.1 Top five Most Affected Countries

Details of total cumulative cases and deaths of top 5 most affected countries in the world is represented below: -

(Data as of 29 November 2020)

S. No	Reporting Country/Territory/Area	Cumulative cases	New cases in last 7 days	Cumulative deaths	Total new deaths (per million population)
1	The United States of America	12 939 666	1 150 654	262 736	794
2	India	9 392 919	297 113	136 696	99
3	Brazil	6 238 350	218 186	171 974	809
4	Russian Federation	2 269 316	179 987	39 527	271
5	France	2 169 811	80 458	51 767	793

Figure 16: Confirmed and Death cases of 5 topmost affected countries

World map depicting countries reported highest number of cases and fatalities is appended below:-

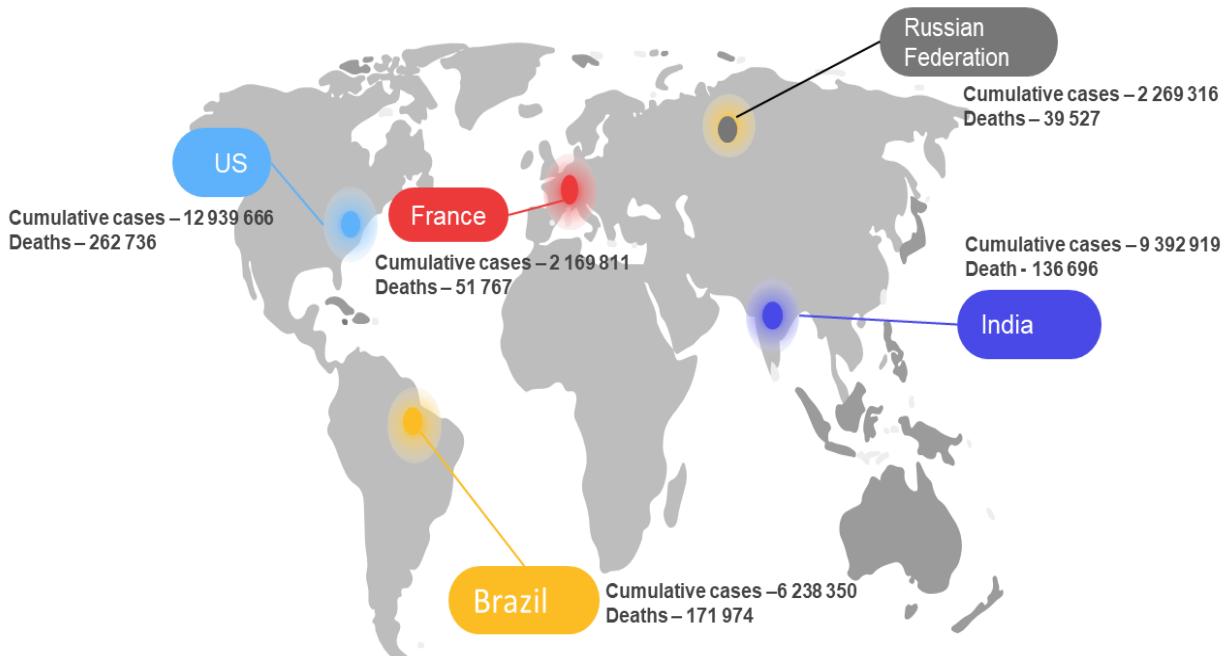


Figure 17: Countries with highest number of cases

### 2.3.2 Countries with Lowest Number of Cases

(Data as of 29 November 2020)

S. No	Reporting Country/Territory/Area	Cumulative Cases	New deaths in last 7 days	Cumulative deaths	Deaths (per million population)
1	Vanuatu	1	0	0	<1

2	Wallis and Futuna	3	1	0	<1
3	Marshall Islands	4	0	0	<1
4	Anguilla	4	1	0	<1
5	Saba	5	0	0	<1

Figure 18: Countries with lowest number of cases

A graphical representation of the above given table is appended below: -

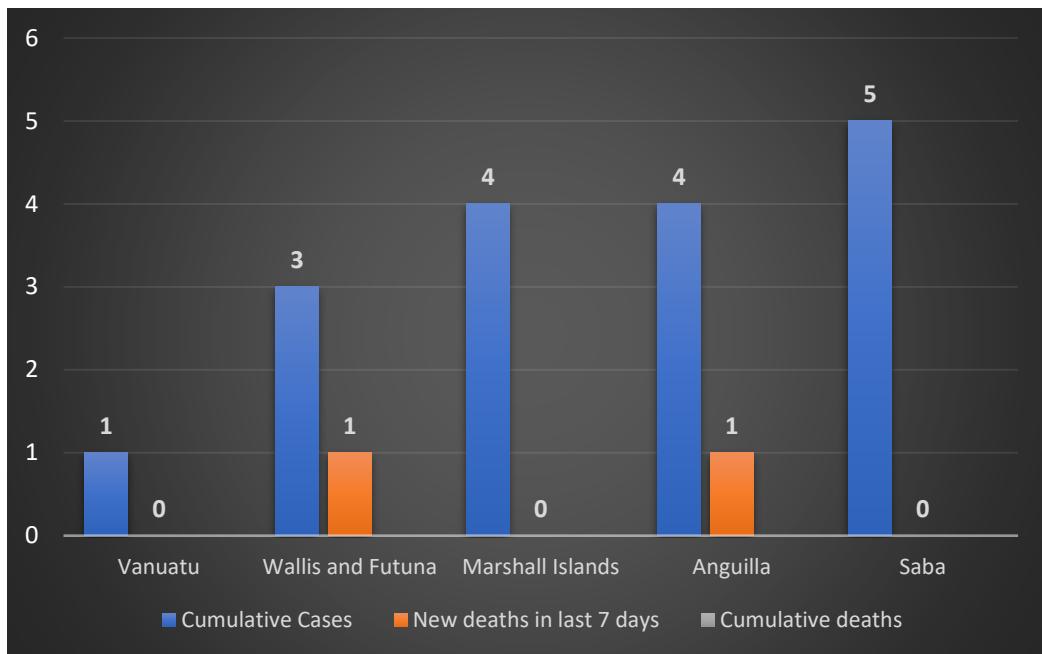


Figure 19: Countries with lowest number of cases

## 2.4 State and Union Territory

### 2.4.1 State / Union territory with Highest Number of Cases

S. No	State /UT	Total Active cases	Cured/Discharged/Migrated	Deaths
1	Maharashtra	86612	1703274	47472
2	Andhra Pradesh	6742	856320	7014
3	Karnataka	24708	852584	11821
4	Tamil Nadu	10988	763428	11747
5	Kerala	61342	556378	2329

Figure 20: State/UT with highest number of cases

A graph depicting the above tabulated data is represented below for ease of comprehension.

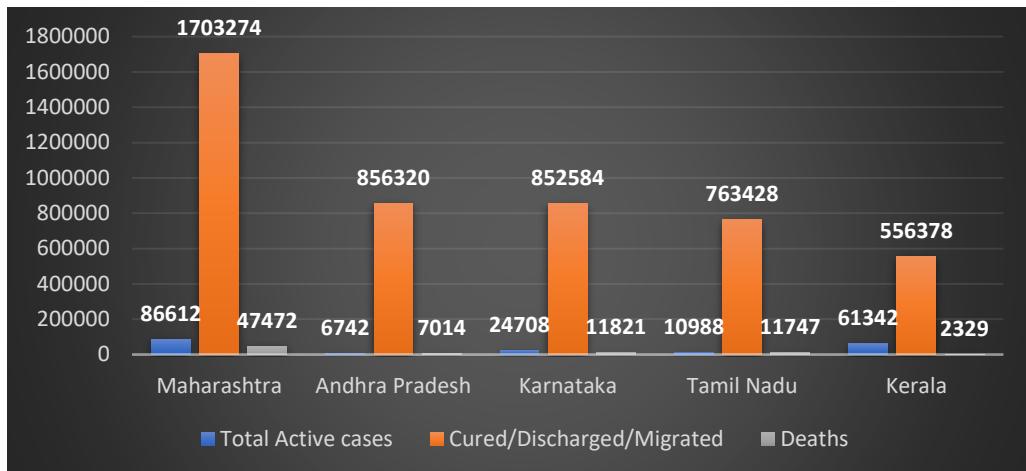


Figure 21: States with highest number of cases

#### 2.4.2 State / Union territory with Lowest Number of Cases

S. No	State /UT	Total Active cases	Cured/Discharged/Migrated	Deaths
1	Dadra and Nagar Haveli and Daman and Diu	14	3324	2
2	Mizoram	235	3647	6
3	Andaman and Nicobar Islands	71	4597	61
4	Sikkim	320	4669	111
5	Ladakh	859	7713	119

Figure 22: State/UT with lowest number of cases

A graph depicting the above tabulated data is represented below for ease of comprehension.

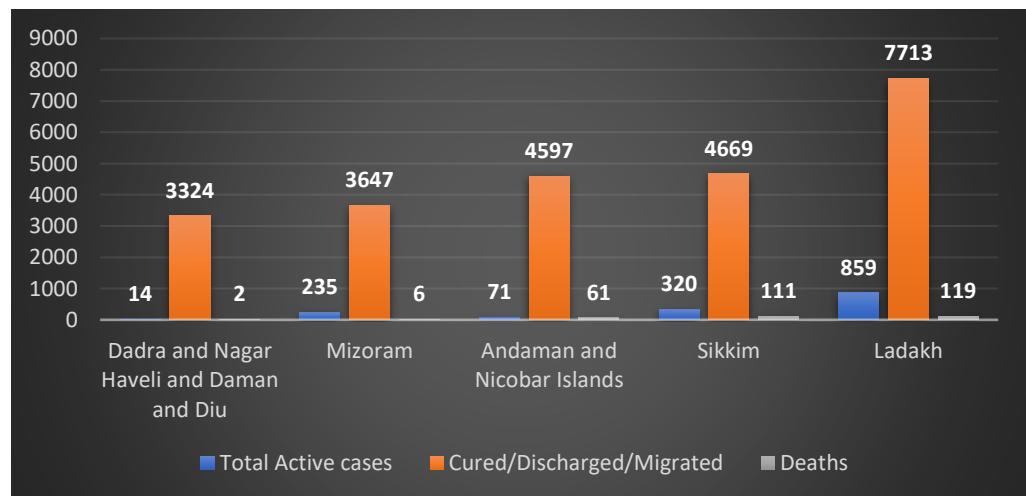


Figure 23: States with lowest number of cases

### 2.4.3 State Wise Fatality Rates<sup>27</sup>

As on 04 December 2020, the coronavirus active cases in India has reduced to 4.16 lakh. The map below shows the active cases and death in different states and UT.

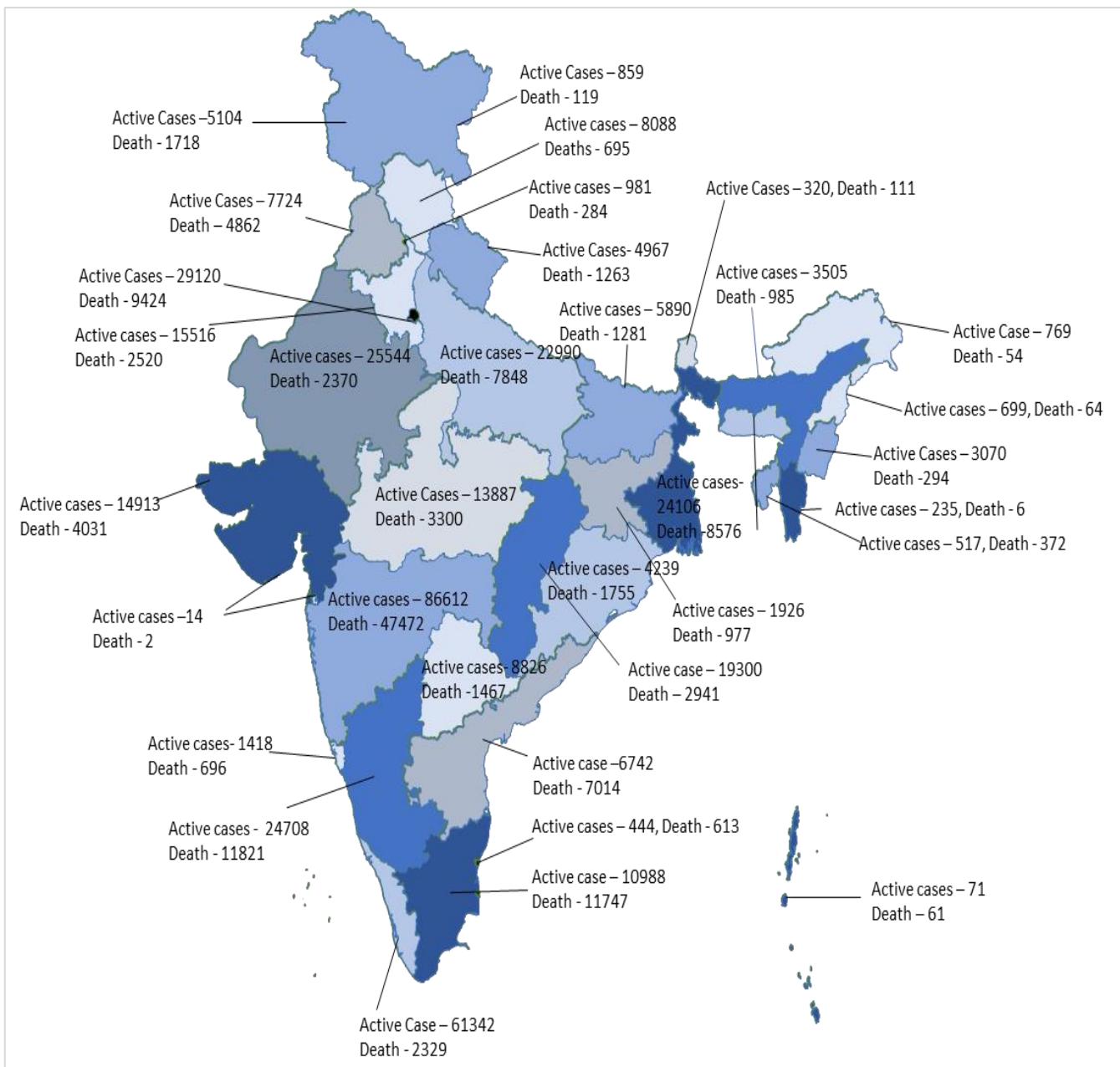


Figure 24: Active and death cases in India

<sup>27</sup> <https://www.mohfw.gov.in/>

## 3 Cure & Treatment

### 3.1 COVID-19 Vaccines

The pandemic has claimed lives of more than 12 lakh people across the world, while the number of COVID-19 cases have surged to 46.4 million. As coronavirus cases continue to rise across the world, various scientists and medical researchers, across the world, are working day in and day out to develop a potential cure/ vaccine for COVID-19 infection. Vaccine candidates of several companies are at various stages of trials, and it is likely to take time before the world eventually gets its first shot against COVID-19. There are more than 213 known entities working on the cure (some details are mentioned in earlier Editions - I, II, III, IV, V, VI and VII) and at least 35 of them have entered the clinical trial phase, including three vaccines that are being developed in India. The list of top leading candidates at various stages of clinical trials are depicted in the below infographics.

In India<sup>28</sup>, according to ICMR, there are three potential COVID-19 vaccine under advanced human trails - Bharat Biotech's COVAXIN, Oxford's Covishield, and Zydus Cadila's ZyCoV-D. Serum Institute of India has already begun phase III trials of Oxford's vaccine candidate at 17 sites across the country. Bharat Biotech International Limited's vaccine candidate has reached Gujarat for phase 3 trials. Ahmedabad's Sola civil hospital is among 130 centres across the country selected for COVAXIN phase three trials. As per the latest reports, Bharat Biotech is planning to launch its vaccine, for COVID-19, in the second quarter next year if it gets the requisite approvals from the concerned Indian regulatory authorities.<sup>29</sup>

<sup>30</sup>On 02 December 2020, Britain has become the first country in the world to approve the Pfizer-BioNTech coronavirus vaccine. They have said that the vaccine will be rolled out from next week onwards. Pfizer-BioNTech have prepared a COVID-19 vaccine in partnership with each other. While last week they declared that the vaccine was 95 per cent effective, in another step forward, they have filed for emergency use authorization in Europe. Reports of Pfizer filing for emergency use authorization from the US FDA had come out, soon after the announcement on efficacy.

Moderna had also announced that their vaccine candidate was 94.1 per cent effective in COVID-19, while a hundred per cent effective in severe COVID-19. They had also said that they will be immediately filing for emergency use approval in the US, as well as Europe, on Monday.

Sputnik V has been one of the most talked-about vaccine candidates around the world. The vaccine became the first, globally, to be approved for public use. However, trials of the vaccine are still underway. Interim analysis has found that the vaccine is about 95 per cent effective in preventing COVID-19. Dr Reddy's Laboratories is testing the vaccine in India, and trials have now commenced in the country.

The Oxford-AstraZeneca COVID-19 vaccine has recently been talked about because of the spat between the Serum Institute of India, and a vaccine trial participant from Chennai, India. The

<sup>28</sup> <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/coronavirus-vaccine-india-3-covid-vaccines-in-trial-phase-india-ready-to-mass-produce-says-pm-modi/photostory/77561111.cms?picid=77561243>

<sup>29</sup> <https://www.timesnownews.com/health/article/bharat-biotech-to-launch-india-s-first-coronavirus-vaccine-covaxin-in-q2/676096>

<sup>30</sup> <https://www.timesnownews.com/health/article/covid-19-a-status-update-on-the-leading-coronavirus-vaccine-candidates-around-the-world/689356>

participant has alleged that he suffered from severe neurological symptoms due to the vaccine. However, SII has denied all claims and said that this is being done to malign the reputation of the institute. The matter is currently being looked into by the Drug Controller General of India. Legal notices from both ends have been issued to the respective parties.

Meanwhile, CEO of Serum Institute had recently said that they plan on filing for emergency use authorization in India, in about two weeks' time.

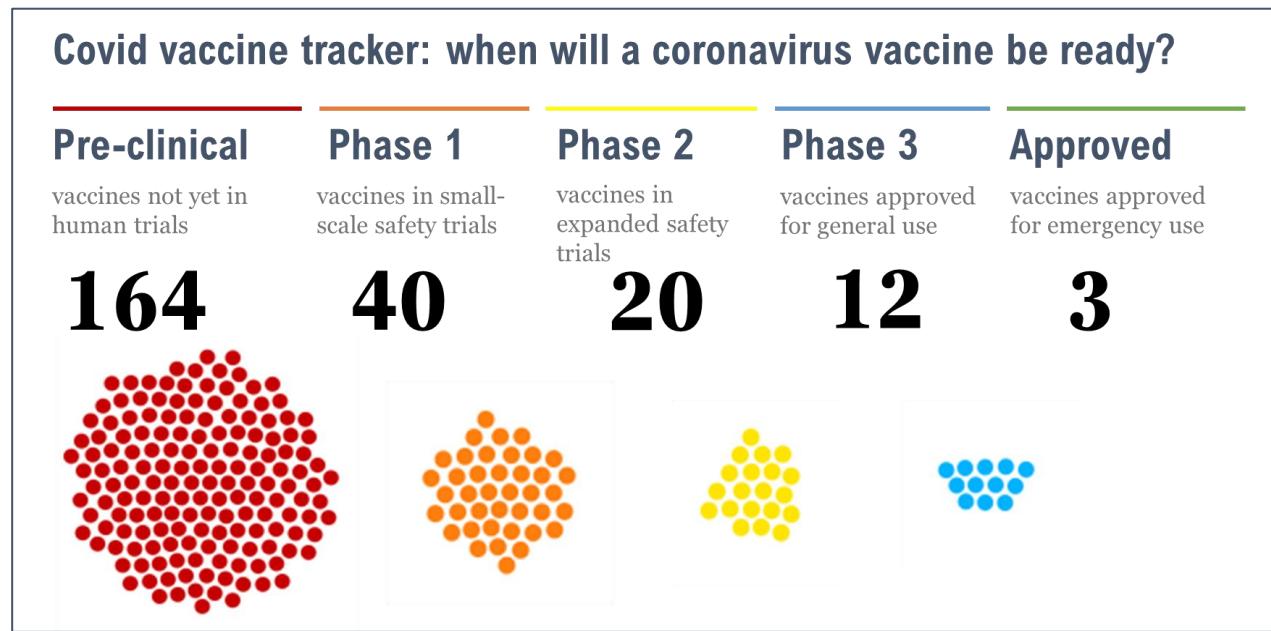


Figure 25: Covid-19 vaccine tracker (number of vaccines in different stages)

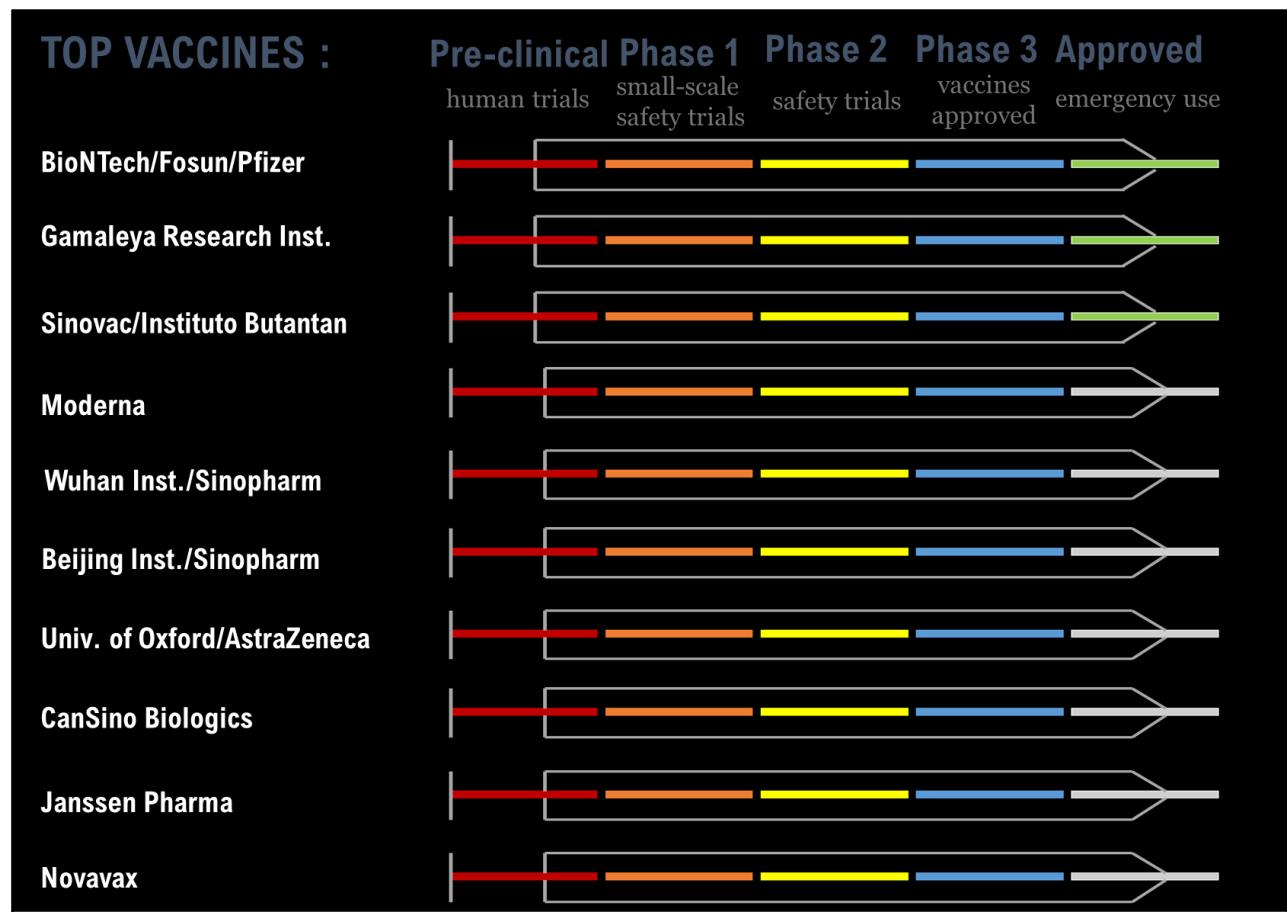
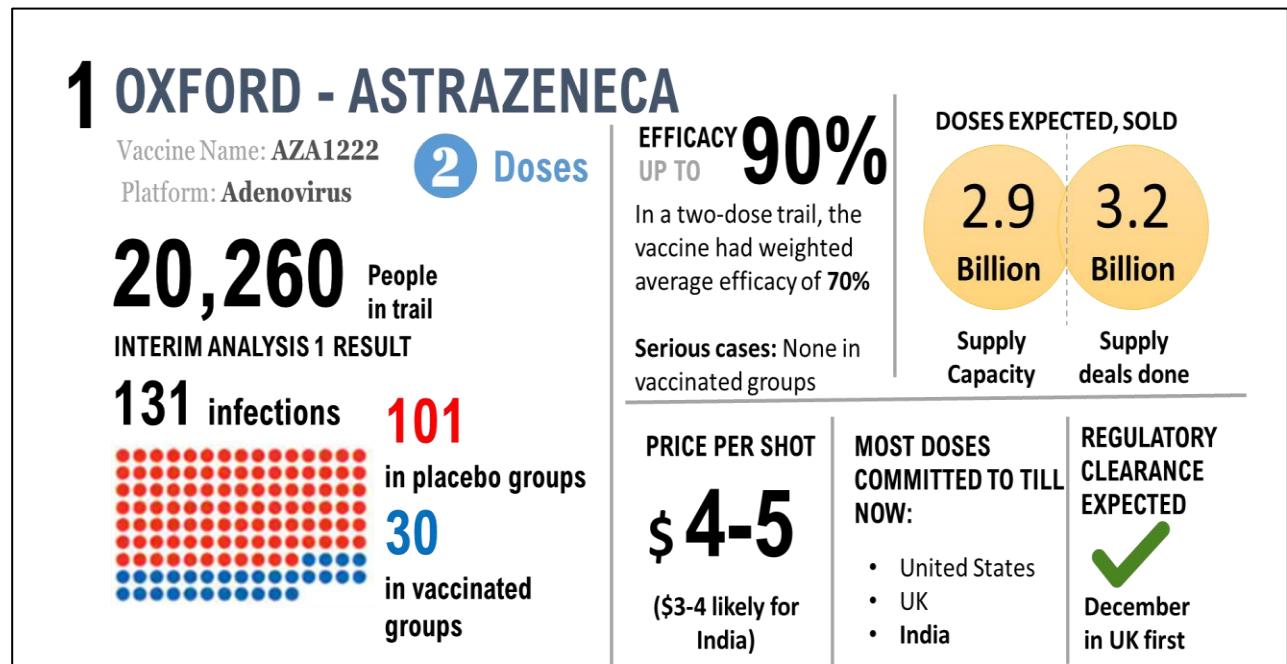
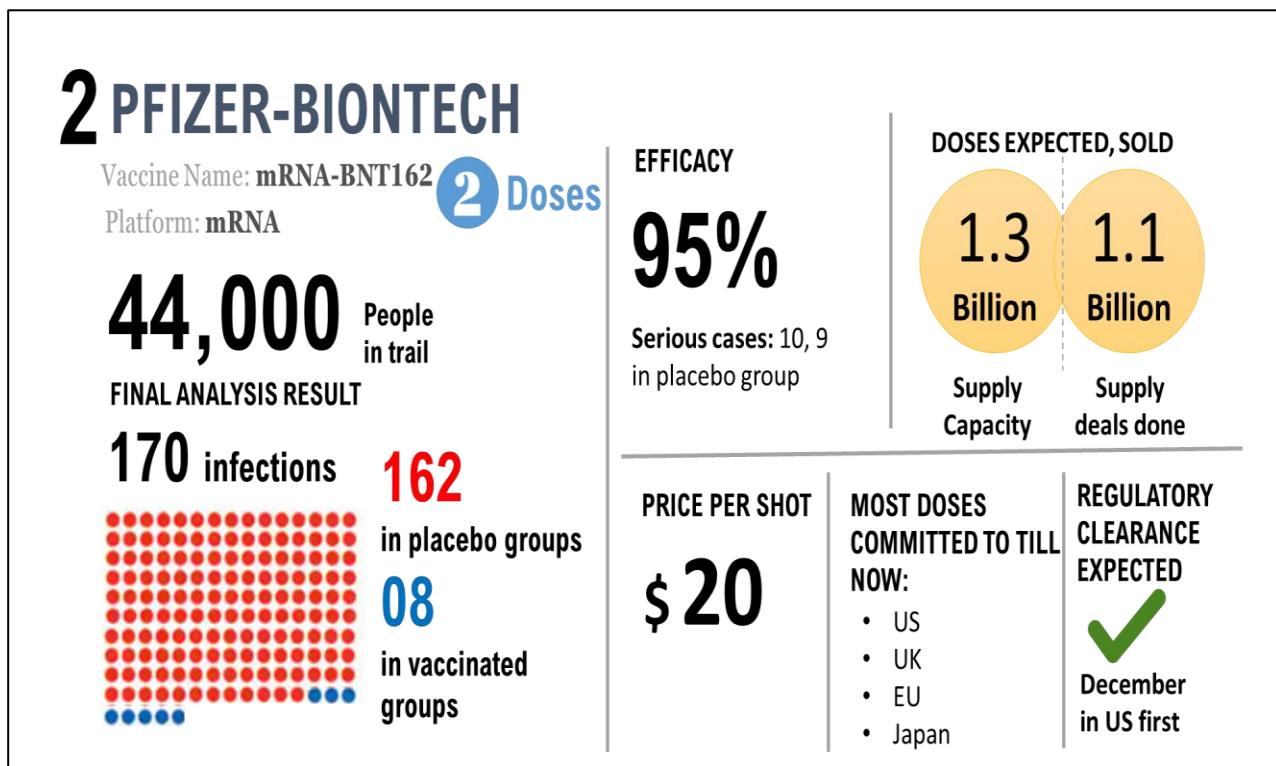


Figure 26: Tracking COVID-19 vaccines (top ten contenders)



- Figure 27: Oxford - AstraZeneca



-Figure 28: Pfizer - Biontech

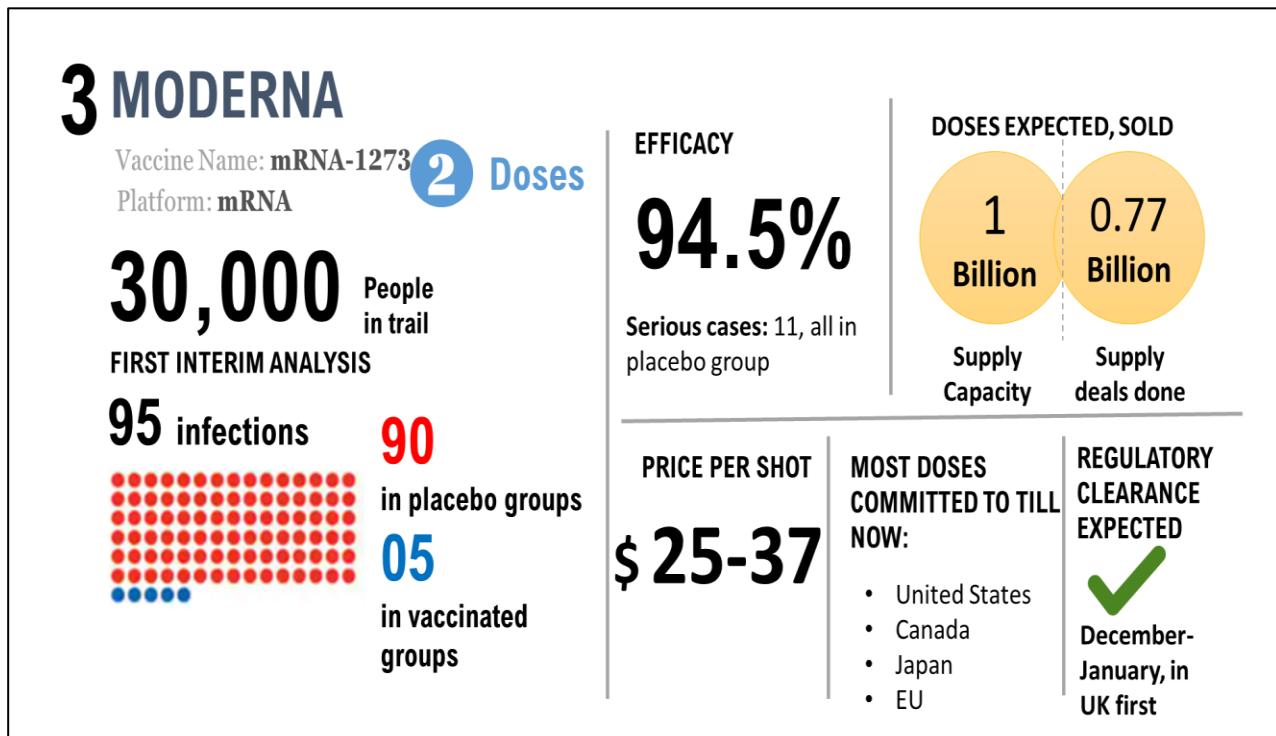


Figure 29: Moderna

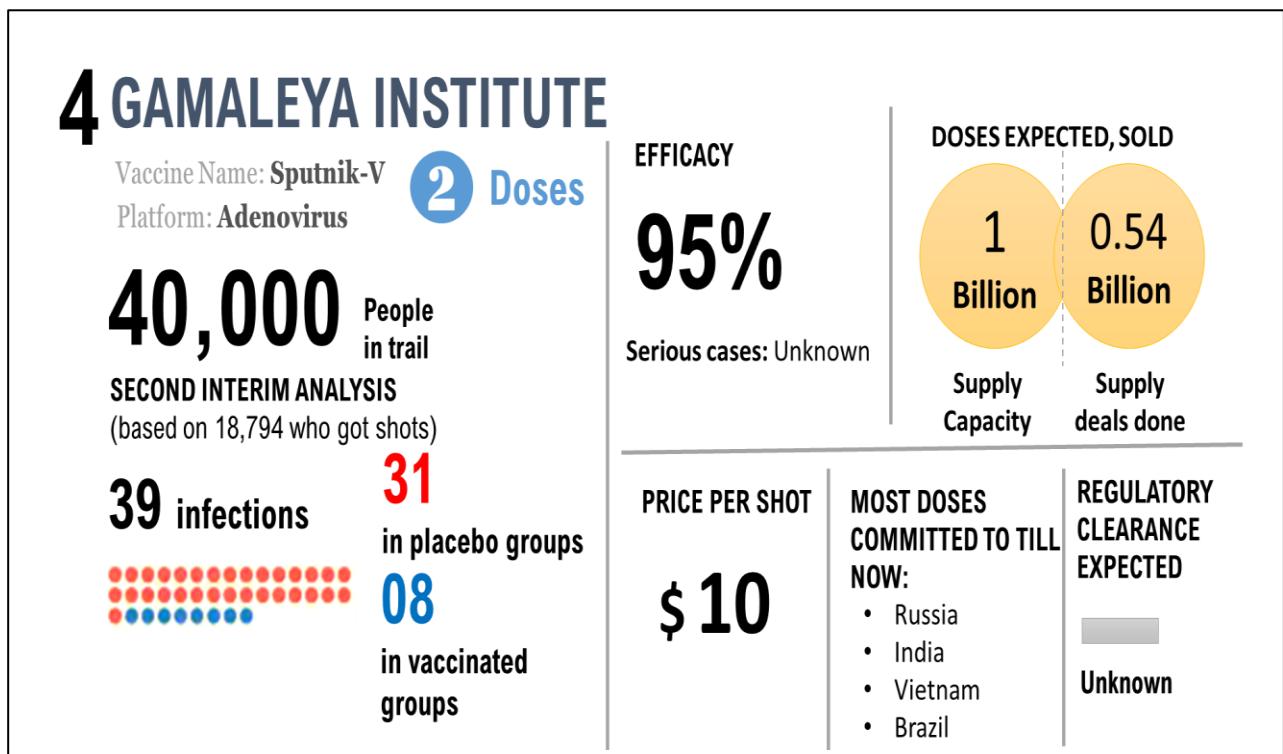


Figure 30: Gamaleya Institute

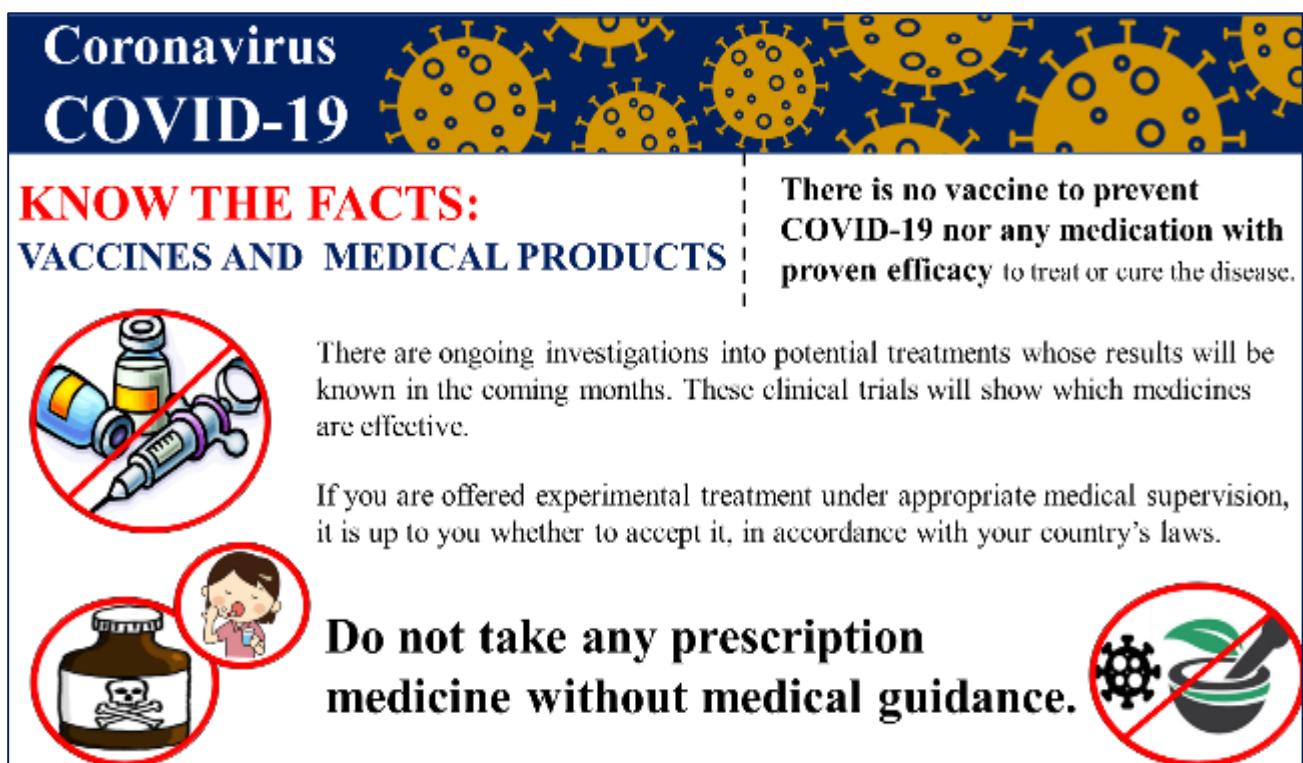


Figure 31: Know the facts about vaccines and medical products

### 3.2 COVID-19 Drugs

The health ministry has revised the clinical management protocol for treatment of COVID-19 patients. The revised treatment protocol to deal with the deadly infection, allows use of antiviral drug Remdesivir in moderate cases and Hydroxychloroquine in patients during the early course of the disease. It also recommends an off-label application of Tocilizumab, a drug that modifies the immune system or its functioning, and convalescent plasma for treating coronavirus-infected patients in moderate stage of the illness, besides adding loss of smell or taste to the list of Covid-19 symptoms. A detailed list of drugs is depicted below: -

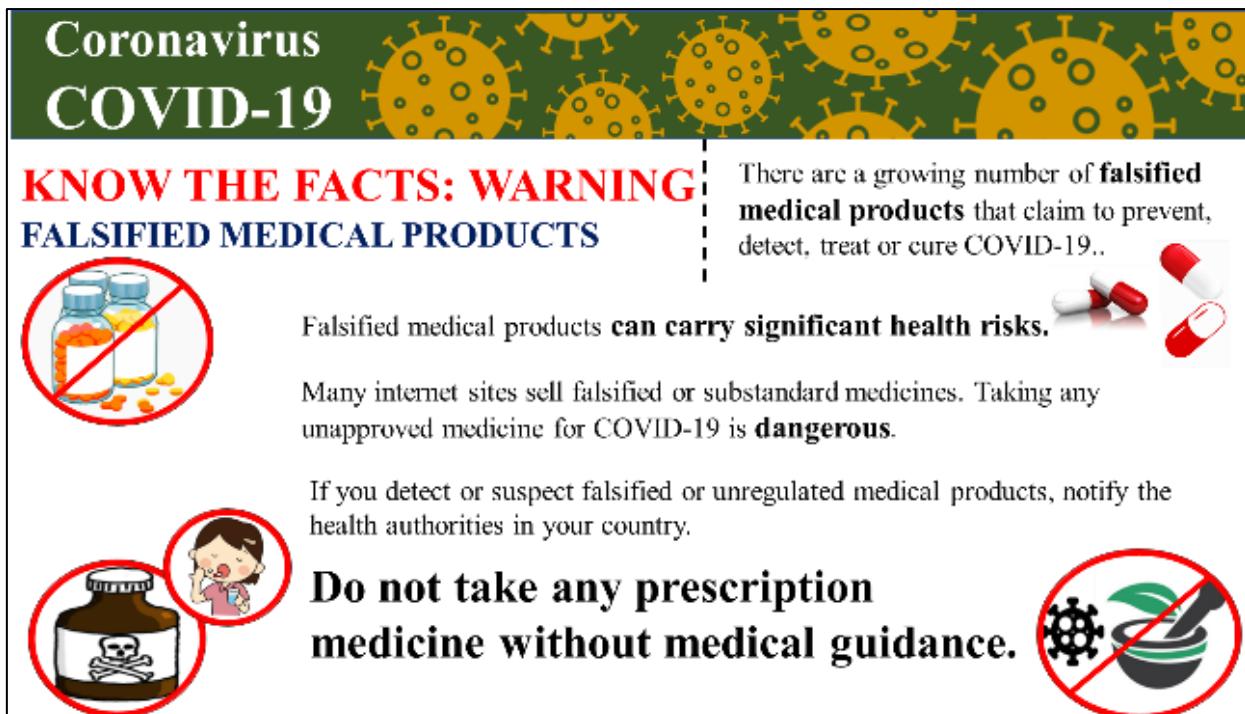


Figure 32: Warning about falsified medical products

#### 3.2.1 Remdesivir<sup>31</sup>

On 22 October 2020, the F.D.A. gave full approval to the drug Remdesivir for use in patients 12 years and older. US regulators are now allowing use of experimental antiviral drug remdesivir for hospitalized patients, with COVID-19, under emergency use authorization (critically ill patients who need supplemental oxygen). Zydus Cadila on 13<sup>th</sup> August 2020 launched the cheapest generic version of Gilead Sciences' antiviral drug in India, to treat COVID-19. The drug has been launched under the brand name Remdac, which will be used to treat patients suffering from severe symptoms of COVID-19. Remdac (Remdesivir) has been priced at INR 2,800 by Zydus, which sums up to (\$37.44) per 100mg vial. Remdac is the most economical Remdesivir brand in India. Initial studies showed that it reduced the recovery time of patients from 15 days to 11 days. (The study defined recovery as “either discharge from the hospital or hospitalization for infection-control purposes only”.) The trial did not show any effect on mortality. However, in November 2020, The

<sup>31</sup> <https://theprint.in/health/remdesivir-reduces-recovery-time-of-covid-patients-from-15-days-to-11-finds-new-study/427953/?amp#referrer=https%3A%2F%2Fwww.google.com&tf=From%20%251%24s>  
<https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>

World Health Organisation (WHO)<sup>32</sup> has suspended Gilead's remdesivir, the popular antiviral medicine that was initially being touted as a potential treatment for Covid-19 cases from its list of medicines, as there is no evidence the drug improves survival or reduces the need for ventilation. It was authorised for use as a treatment for coronavirus in over 50 countries. Notwithstanding the contrarian results, the drug has been authorized for use in India. According to the Ministry of Health and Family Welfare Remdesivir (under Emergency Use Authorization) may be considered in patients with moderate disease (The drug is most beneficial for the patient who needs supplemental oxygen during hospitalization) with none of the following contraindications:

- I. AST/ALT > 5 times Upper limit of normal (ULN)
- II. Severe renal impairment (i.e., eGFR < 30ml/min/m<sup>2</sup> or need for hemodialysis)
- III. Pregnancy or lactating females
- IV. Children (< 12 years of age)

Dose: 200 mg IV on day 1 followed by 100 mg IV daily for 4 days (total 5 days)

<https://www.bbc.com/news/world-us-canada-54654635>

<https://www.nytimes.com/interactive/2020/science/coronavirus-drugs-treatments.html>

<https://www.livemint.com/science/health/at-rs-2-800-zydus-cadila-launches-india-s-cheapest-remdesivir-version-for-treatment-of-covid-19-11597292543769.html>

[https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download\\_file\\_division.jsp?num\\_id=NjM4Mg==](https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NjM4Mg==)

<https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

<https://www.livemint.com/news/world/us-fda-allows-use-of-remdesivir-for-all-hospitalised-covid-19-patients-11598774350183.html>

### 3.2.2 Hydroxychloroquine<sup>33</sup>

The health ministry, experts from the Indian Council of Medical research and the Drug Controller General of India, reviewed the clinical management protocol for COVID-19 on June 13 and limited HCQ's use to management of moderate patients, advising that it be avoided in patients with "severe disease". Several large observational studies have shown no effect on mortality or other clinically meaningful outcomes. As such, the evidence base behind its use remains limited as with other drugs and should only be used after shared decision making with the patients while awaiting the results of ongoing studies. As is the case with other antivirals, this drug should be used as early in the disease course as possible to achieve any meaningful effects and should be avoided in patients with severe disease. An ECG should ideally be done before prescribing the drug to measure QTc interval (and HCQ avoided if QTc is >500 ms).

Dose: 400 mg BD on day 1 followed by 400mg daily for next 4 days.

<sup>32</sup> <https://www.livemint.com/news/world/who-suspends-remdesivir-from-list-of-medicines-after-warning-against-use-on-hospitalised-covid-patients-11605927762468.html>

<sup>33</sup> <https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>  
[https://www.icmr.gov.in/pdf/covid/techdoc/V5\\_Revised\\_advisory\\_on\\_the\\_use\\_of\\_HCQ\\_SARS\\_CoV2\\_infection.pdf](https://www.icmr.gov.in/pdf/covid/techdoc/V5_Revised_advisory_on_the_use_of_HCQ_SARS_CoV2_infection.pdf)  
<https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

The detailed revised advisory on the use of HCQ as prophylaxis for Covid-19 infection can be accessed here:-

[https://www.icmr.gov.in/pdf/covid/techdoc/V5\\_Revised\\_advisory\\_on\\_the\\_use\\_of\\_HCQ\\_SARS\\_CoV2\\_infection.pdf](https://www.icmr.gov.in/pdf/covid/techdoc/V5_Revised_advisory_on_the_use_of_HCQ_SARS_CoV2_infection.pdf)

### 3.2.3 Dexamethasone<sup>34</sup>

Dexamethasone has emerged as a life-saving drug, as declared on June 17, 2020. The Ministry of Health and Family Welfare, Government of India, has revised the clinical management protocol for COVID-19. In the new guidelines, the Ministry has allowed the use of dexamethasone, the first drug proven to treat COVID-19. It was included in the treatment protocols for COVID-19 patients in moderate to severe stages of illness among other therapeutics. The updated protocol includes the advice to use dexamethasone as an alternative choice to methylprednisolone for managing moderate to severe cases of COVID-19. According to the revised 'Clinical Management Protocols for COVID-19', dexamethasone which is already used in treating lung infections besides in a wide range of conditions for its anti-inflammatory and immunosuppressant effects, can be used as an alternative to methylprednisolone which already existed in the treatment guidelines. The revised treatment protocols for moderate cases advised considering methylprednisolone 0.5 to 1 mg/ kg or dexamethasone 0.1 to 0.2 mg/ kg for three days, preferably within 48 hours of admission or if oxygen requirement is increasing and if inflammatory markers are increased. Review the duration of administration as per clinical response. For patients having respiratory distress requiring mechanical ventilation, both non- invasive and invasive, the ministry says methylprednisolone 1 - 2mg/ kg/ day or dexamethasone 0.2 to 0.4 mg/ kg per day should be considered for 5-7 days in two divided doses, if not given already.

<https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

### 3.2.4 Favipiravir<sup>35</sup>

Hyderabad: Raghava Life Sciences (RLS) has received the drug control body's approval to manufacture and market the Favipiravir bulk drug. Favipiravir anti-viral drug is prescribed for COVID-19 patients with mild to moderate symptoms. The Central Drugs Standard Control Organisation (CDSCO), of which the Drug Controller General of India (DCGI) is a part, granted the approvals "as part of accelerated approval process" considering the emergency situation in light of COVID-19 outbreak for restricted emergency use in the country. Also, several Indian pharmaceutical formulators, including Lupin, Hetero, Cipla and Sun Pharma have launched their oral Favipiravir pill under various own brands at competitive prices. In a recent study conducted by Dr Udwadia to test the efficacy of this drug, 150 patients with mild to moderate symptoms were chosen to evaluate the efficacy and safety of Favipiravir treatment and have found 69.8% of patients in the Favipiravir treatment achieved clinical cure by Day 4.

<https://mumbaimirror.indiatimes.com/coronavirus/news/city-docs-find-proof-favipiravir-works-for-the-moderately-ill/articleshow/79332230.cms>

<https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/hyderabad-pharmaceutical-raghava-life-sciences-gets-nod-to-make-favipiravir-api/articleshow/77454139.cms>

<sup>34</sup>

<sup>35</sup> <https://www.expresspharma.in/latest-updates/optimus-launches-covid-19-drug-favipiravir-commences-commercial-export/>

[https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download\\_file\\_division.jsp?num\\_id=NjIxMw==](https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NjIxMw==)

[https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download\\_file\\_division.jsp?num\\_id=NjM4Mg==](https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NjM4Mg==)

### 3.2.5 Itolizumab<sup>36</sup>

The National Task Force on COVID-19 has decided against including Itolizumab drug in clinical management protocols for treating the disease even though the Drug Controller General of India (DCGI) has approved Itolizumab, for restricted emergency use on COVID-19 patients with moderate to severe acute respiratory distress syndrome. Itolizumab is already in use to cure skin disorder psoriasis, rheumatoid arthritis, multiple sclerosis, and autoimmune disorders. It has been in use since 2013 under the brand name of Alzumab. It is being trialed in Mumbai and Delhi on moderately to severely ill COVID patients. The Drug Controller General of India has approved Itolizumab injection for the treatment of 'cytokine' release syndrome in moderate to severe acute respiratory distress syndrome, in patients, due to COVID-19. After satisfactory result from clinical trials, the drug was approved.

<https://www.hindustantimes.com/india-news/dcgi-approves-limited-use-of-psoriasis-injection-for-covid/story-bkVPzdJ7Y9oaCiX2NJkypO.html>

<https://www.hindustantimes.com/india-news/health-ministry-decides-against-including-itolizumab-in-clinical-management-protocols-for-covid-19-report/story-NAGlyUGbr2ULL0j4sv87qL.html>

### 3.2.6 Convalescent Plasma Therapy<sup>37</sup>

Plasma therapy is meant for critical patients with low oxygen saturation levels, or those who are suffering a cytokine storm. Patients recovered from severe COVID-19 donate their plasma, which is then injected into other critical patients to boost their immunity. A protocol approved by ICMR is used to select which patient is best suited for plasma therapy. Preference is given to those at risk of cytokine storm, extreme breathlessness with severe pneumonia.

It may be considered in patients with moderate disease who are not improving (oxygen requirement is progressively increasing) despite use of steroids. Special criteria while considering convalescent plasma include:

- I. ABO compatibility and cross matching of the donor plasma
- II. Neutralizing titer of donor plasma should be above the specific threshold (if the latter is not available, plasma IgG titer (against S-protein RBD) above 1:640 should be used)
- III. Recipient should be closely monitored for several hours post transfusion for any transfusion related adverse events
- IV. Use should be avoided in patients with IgA deficiency or immunoglobulin allergy

<sup>36</sup> <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

<sup>37</sup> <https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>, <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

Dose is variable ranging from 4 to 13 ml/kg (usually 200 ml single dose given slowly over not less than 2 hours).

### 3.2.7 Tocilizumab<sup>38</sup>

This is an immunosuppressant commonly used to treat rheumatoid arthritis. In Mumbai, more than 100 severely ill COVID patients have been treated with this drug to help prevent the use of a ventilator; government hospitals are giving it free. It may be considered in patients with moderate disease with progressively increasing oxygen requirements and in mechanically ventilated patients not improving despite use of steroids. Long term safety data for the drug remains largely unknown. Special considerations before its use include:

- I. Presence of raised inflammatory markers (e.g., CRP, Ferritin, IL-6)
- II. Patients should be carefully monitored post Tocilizumab for secondary infections and neutropenia
- III. The drug is contraindicated in PLHIV, those with active infections (systemic bacterial/fungal), Tuberculosis, active hepatitis, ANC < 2000/mm<sup>3</sup> and Platelet count < 1,00,000/mm<sup>3</sup>

Dose: 8mg/kg (maximum 800 mg at one time) given slowly in 100 ml NS over 1 hour; dose can be repeated once after 12 to 24 hours if needed.

<https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

## 3.3 Healthcare infrastructure

In the earlier Edition III, we have mentioned the relevant information regarding healthcare facilities, infrastructures, hospitals, and telemedicine.

Countries with rapidly increasing numbers of COVID-19 cases are being forced to expand their critical-care capacity and expansion of healthcare infrastructure should be utmost priority. The efficacy of a nation's healthcare system in safeguarding lives and reducing the current mortality rate due to COVID-19, will build up confidence in their health systems.

Indian Railways has converted coaches into isolation wards for COVID-19 virus patients, 960 isolation coaches across five states--Delhi, Uttar Pradesh, Andhra Pradesh, Telangana and Madhya Pradesh have been prepared. Out of 960 isolation ward coaches, 503 have been deployed in Delhi, 20 in Andhra Pradesh, 60 in Telangana, 372 in Uttar Pradesh and five in Madhya Pradesh. The government says Railways will deploy two liaison officers at the location of coaches to assist State government officials. All efforts are being made to reduce the heat in the coaches in the given weather conditions<sup>39</sup>.

The Health Ministry has identified hospitals and facilities of the State/ UT governments as well as the central government. The detailed list of COVID-19 hospitals earmarked by the States/ UTs along with the State specific help line numbers can be accessed here: -

<https://www.mohfw.gov.in/pdf/StatewiseCovidHospitalslink19062020.pdf>

<sup>38</sup> <https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>, <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

<sup>39</sup> <https://www.livemint.com/news/india/indian-railways-arranges-960-covid-care-coaches-in-five-states-11592402206693.html>

### 3.3.1 Designated COVID Hospitals<sup>40</sup>

On May 07, 2020 the Union Health Ministry classified hospitals into three categories i.e. Dedicated COVID hospitals, dedicated COVID healthcare centers and COVID care centers, in order to optimally utilize the resources. They have also ensured enough capacity of beds for moderate to severe cases. The details of hospitals being prepared and allowed to take care of COVID-19 cases is an ongoing process and is made available on MoHFW as well as State medical department websites.

- I. Dedicated COVID Hospitals - The Dedicated Covid Hospitals are hospitals that offer comprehensive care primarily for those who have been clinically assigned as severe. These hospitals shall have fully equipped ICUs, ventilators, and beds with assured oxygen support. These hospitals shall have separate areas for suspect and confirmed cases. Should have good transport facility in case an emergency transfer is needed.
- II. Dedicated COVID healthcare centers - The Dedicated COVID Health Centres are hospitals that offer care for all cases that have been clinically assigned as moderate. The DCHCs shall have separate areas for suspect and confirmed cases. These hospitals shall have beds with assured oxygen support and every DCHC is mapped to one or more Dedicated COVID Hospitals.
- III. COVID care centers - The COVID Care Centres shall offer care only for cases that have been clinically assigned as mild or very mild cases or COVID suspect cases. These facilities may be set up by the States/ UTs in hostels, hotels, schools, stadiums, lodges, etc., both public and private. These facilities shall have separate areas for suspected and confirmed cases.

Details about the COVID care center, COVID health center and Dedicated COVID hospital can be accessed of all the States from the link given in the table below: -

Designated COVID Hospitals		
S. No	States	Link
1	Andaman & Nicobar Island	<a href="https://covidindia.org/andaman-and-nicobar-islands/">https://covidindia.org/andaman-and-nicobar-islands/</a>
2	Andhra Pradesh	<a href="https://covidindia.org/andhra-pradesh/">https://covidindia.org/andhra-pradesh/</a>
3	Arunachal Pradesh	<a href="https://covidindia.org/arunachal-pradesh/">https://covidindia.org/arunachal-pradesh/</a>
4	Assam	<a href="https://covidindia.org/assam/">https://covidindia.org/assam/</a>
5	Bihar	<a href="https://covidindia.org/bihar/">https://covidindia.org/bihar/</a>
6	Chhattisgarh	<a href="https://covidindia.org/chhattisgarh/">https://covidindia.org/chhattisgarh/</a>
7	Chandigarh	<a href="https://covidindia.org/chandigarh/">https://covidindia.org/chandigarh/</a>
8	Delhi	<a href="https://covidindia.org/delhi/">https://covidindia.org/delhi/</a>
9	Dadar & Nagar Haveli and Daman & Diu	<a href="https://covidindia.org/dadar-nagar-haveli-and-damand-diu/">https://covidindia.org/dadar-nagar-haveli-and-damand-diu/</a>
10	Goa	<a href="https://covidindia.org/goa/">https://covidindia.org/goa/</a>
11	Gujarat	<a href="https://covidindia.org/gujarat/">https://covidindia.org/gujarat/</a>
12	Haryana	<a href="https://covidindia.org/haryana/">https://covidindia.org/haryana/</a>
13	Himachal Pradesh	<a href="https://covidindia.org/himachal-pradesh/">https://covidindia.org/himachal-pradesh/</a>

<sup>40</sup><https://health.economictimes.indiatimes.com/news/hospitals/7740-dedicated-covid-19-health-facilities-in-483-districts-identified-health-ministry/75670863>

<b>14</b>	Jammu & Kashmir	<a href="https://covidindia.org/jammu-and-kashmir/">https://covidindia.org/jammu-and-kashmir/</a>
<b>15</b>	Jharkhand	<a href="https://covidindia.org/jharkhand/">https://covidindia.org/jharkhand/</a>
<b>16</b>	Karnataka	<a href="https://covidindia.org/karnataka/">https://covidindia.org/karnataka/</a>
<b>17</b>	Kerala	<a href="https://covidindia.org/kerala/">https://covidindia.org/kerala/</a>
<b>18</b>	Ladakh	<a href="https://covidindia.org/ladakh/">https://covidindia.org/ladakh/</a>
<b>19</b>	Madhya Pradesh	<a href="https://covidindia.org/madhya-pradesh/">https://covidindia.org/madhya-pradesh/</a>
<b>20</b>	Maharashtra	<a href="https://covidindia.org/maharashtra/">https://covidindia.org/maharashtra/</a>
<b>21</b>	Manipur	<a href="https://covidindia.org/manipur/">https://covidindia.org/manipur/</a>
<b>22</b>	Meghalaya	<a href="https://covidindia.org/meghalaya/">https://covidindia.org/meghalaya/</a>
<b>23</b>	Mizoram	<a href="https://covidindia.org/mizoram/">https://covidindia.org/mizoram/</a>
<b>24</b>	Nagaland	<a href="https://covidindia.org/nagaland/">https://covidindia.org/nagaland/</a>
<b>25</b>	Odisha	<a href="https://covidindia.org/odisha/">https://covidindia.org/odisha/</a>
<b>26</b>	Puducherry	<a href="https://covidindia.org/puducherry/">https://covidindia.org/puducherry/</a>
<b>27</b>	Punjab	<a href="https://covidindia.org/punjab/">https://covidindia.org/punjab/</a>
<b>28</b>	Rajasthan	<a href="https://covidindia.org/rajasthan/">https://covidindia.org/rajasthan/</a>
<b>29</b>	Sikkim	<a href="https://covidindia.org/sikkim/">https://covidindia.org/sikkim/</a>
<b>30</b>	Tamil Nadu	<a href="https://covidindia.org/tamil-nadu/">https://covidindia.org/tamil-nadu/</a>
<b>31</b>	Telangana	<a href="https://covidindia.org/telangana/">https://covidindia.org/telangana/</a>
<b>32</b>	Tripura	<a href="https://covidindia.org/tripura/">https://covidindia.org/tripura/</a>
<b>33</b>	Uttarakhand	<a href="https://covidindia.org/uttarakhand/">https://covidindia.org/uttarakhand/</a>
<b>34</b>	Uttar Pradesh	<a href="https://covidindia.org/uttar-pradesh/">https://covidindia.org/uttar-pradesh/</a>
<b>35</b>	West Bengal	<a href="https://covidindia.org/west-bengal/">https://covidindia.org/west-bengal/</a>

Figure 33: Designated COVID hospitals

Details about number of facilities, number of districts covered, total isolation beds etc. can be accessed from the link given below: -

<https://nidm.gov.in/covid19/PDF/covid19/Ministries/Ministry%20of%20Health%20and%20Family%20Welfare/330.pdf>

### 3.3.2 Designated COVID Hotels and Other Facilities

Hotels designated as quarantine facilities can be accessed on respective State websites.

## 3.4 Testing Strategy<sup>41</sup>

The Indian Council of Medical Research (ICMR) on 04 Sep 2020 issued a new advisory regarding the COVID-19 testing strategy and allowed testing on demand for individuals. The ICMR also advised testing on demand for all individuals undertaking travel to other countries or Indian States mandating a negative COVID-19 test at the point of entry. The strategy stresses on testing every individual staying in the containment zones by the Rapid Antigen Test (RAT).

<sup>41</sup> [https://www.icmr.gov.in/pdf/covid/strategy/New\\_additional\\_Advisory\\_23062020\\_2.pdf](https://www.icmr.gov.in/pdf/covid/strategy/New_additional_Advisory_23062020_2.pdf)  
[https://www.icmr.gov.in/pdf/covid/strategy/Advisory\\_for\\_rapid\\_antigen\\_test14062020.pdf](https://www.icmr.gov.in/pdf/covid/strategy/Advisory_for_rapid_antigen_test14062020.pdf)

- I. Further, the existing recommendations related to testing for COVID-19 have been extended, elaborated and divided into four parts: Routine surveillance in containment zones and screening at points of entry.
- II. Routine surveillance in non-containment areas.
- III. Hospital settings and testing on demand.
- IV. Choice of test (RT-PCR, TrueNat or CBNAAT and rapid antigen tests) in order of priority has been listed.

For the testing in healthcare facilities, the strategy recommends a home quarantine of 14 days for all individuals before undergoing elective surgery to minimize the chances of infection before the procedure. It says that all pregnant women in/ near labor who are hospitalized for delivery should be tested for COVID-19.

The details about the additional strategies can be accessed here: -

[https://www.icmr.gov.in/pdf/covid/strategy/Testing\\_Strategy\\_v6\\_04092020.pdf](https://www.icmr.gov.in/pdf/covid/strategy/Testing_Strategy_v6_04092020.pdf)

[https://www.icmr.gov.in/pdf/covid/strategy/Joint\\_Letter\\_Test\\_Track\\_Treat.pdf](https://www.icmr.gov.in/pdf/covid/strategy/Joint_Letter_Test_Track_Treat.pdf)

### 3.4.1 Types of COVID Tests

- I. RT-PCR tests - Real-Time Polymerase Chain Reaction (RT-PCR) test is the most commonly used COVID test in India. It requires a simple swab taken from inside a person's nose or throat to detect the presence of the virus in the body.
- II. Rapid antibody tests - Antibody tests, also known as serological tests, are fast, inexpensive and can be used to check if a community or a large population is exposed to the virus. This test requires a blood sample to detect the presence of the antibodies for coronavirus in the body.
- III. Rapid antigen tests - Rapid antigen tests are fast, inexpensive, and requires a nasal sample to detect the antigen in the body. An antigen is a foreign substance or toxin present in the body that triggers an immune response. Similar to the RT-PCR test, this test can detect the presence of the virus rather than the antibodies.
- IV. TrueNat & CBNAAT tests - TrueNat & CBNAAT tests are generally used for detecting tuberculosis and works similar to RT-PCR tests but produces faster results. ICMR has approved the use of TrueNat & CBNAAT tests for screening and confirmation of COVID-19. These tests require the nasal or throat swab samples to detect the presence of the coronavirus in the body.

<https://indianexpress.com/article/explained/coronavirus-covid-19-testing-procedures-in-india-6479312/>

## 3.5 Testing Collection and Facilities<sup>42</sup>

As per ICMR, over 137 million samples have been tested for COVID-19 across India till 26 November 2020 of which 11,31,204 were examined on 26 November 2020 alone. The network of laboratories under the Indian Council of Medical Research (ICMR) has been expanded to 2,151 across the country. The central government expanded the network of government laboratories designated

<sup>42</sup> [https://www.icmr.gov.in/pdf/covid/labs/Private\\_Lab\\_Advisory\\_11062020.pdf](https://www.icmr.gov.in/pdf/covid/labs/Private_Lab_Advisory_11062020.pdf)

to test samples of suspected coronavirus disease (Covid-19) cases to 1169 laboratories. Among 1169 government laboratories, 520 are approved to test for Real-Time PCR (RT PCR) tests, 610 for TrueNat screening tests, and 39 for CBNAAT testing. Also, additional 982 private laboratories were approved to conduct COVID-19 tests. Among 982 private laboratories, 648 are approved to test RT PCR tests, 245 to test for TrueNat tests and 89 to test for CBNAAT testing. ICMR Director says the goal was to establish a lab in every district of the country, which they have achieved to a large extent. For<sup>43</sup> making COVID-19 testing accessible for all, the government on 23 November launched a mobile COVID-19 RT-PCR Lab at the Indian Council of Medical Research (ICMR). The lab is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) and approved by the ICMR. The cost of the test is INR 499. These tests will be offered free of cost with the cost being borne by the ICMR. The test report would be available within 6 to 8 hours from the time of sample collection compared to the average 24 to 48 hours. Presently India is utilizing over 90 percent of its testing capacity for COVID-19.

Guidelines have been issued by the Indian Council of Medical Research for positive sample storage by ICMR approved private labs that are doing COVID-19 testing by Real time RT-PCR/CB-NAAT/True Nat. The detailed guideline and the list of operational laboratories and the SARS-CoV-2 (COVID-19) Testing; Status Update can be accessed here: -

[https://www.icmr.gov.in/pdf/covid/labs/COVID\\_Testing\\_Labs\\_26112020.pdf](https://www.icmr.gov.in/pdf/covid/labs/COVID_Testing_Labs_26112020.pdf)

S. No	Total Operational (initiated independent testing)	Laboratories reporting to ICMR
1	Real-Time RT PCR for COVID-19	1168 (Govt: 520 + Private: 648)
2	TrueNat Test for COVID-19	855 (Govt: 610 + Private: 245)
3	CBNAAT Test for COVID-19	128 (Govt: 39 + Private: 89)
	<b>Total number of Labs</b>	<b>2151</b>

Figure 34: Total operational laboratories reporting to ICMR

<sup>43</sup> <https://economictimes.indiatimes.com/news/politics-and-nation/amit-shah-launches-mobile-rt-pcr-lab-in-delhi-will-conduct-free-covid-tests/articleshow/79375159.cms>

## 4 Preventive and Safety Measures

The national and public health authority of the country issues regular updates on the coronavirus outbreak and safety measures that should be taken. Post Unlock V, relevant guidelines in respect of preventive and safety measures, that should be incorporated, have been enumerated in this section.

### 4.1 Containment Zones

Containment Zone<sup>44</sup> is a specific geographical area where positive coronavirus cases have been found. In these zones only essential activities are allowed, such as medical emergencies and supply of essential goods and services. There is strict perimeter established in a containment zone, wherein people are not allowed to move. The Rapid Response Team identifies the containment zone based on number of positive cases, contract tracing history and population density. They define a 3 km radius around the epicenter which is called containment zone.

The list of containment zones is updated every week and can be accessed at the MoHFW as well as respective State websites.

<https://www.mha.gov.in/sites/default/files/MHAOrder25112020.pdf>

### 4.2 Isolation Duration and Precaution for Adults with COVID-19<sup>45</sup>

A new study has suggested that the isolation duration and precautions should be done according to the patients' symptoms. The available data has indicated that people with mild to moderate symptoms are not infectious after 10 days and people with more severe to critical illness are not infectious post 20 days after onset of the symptoms. Whereas the people who have recovered, after the onset of the symptoms, shed SARS-CoV-2 RNA in upper respiratory specimens. These findings suggest the symptom-based strategy for ending isolation of the patients. People are susceptible of reinfection if they are infected with related endemic human beta coronavirus. If someone has recovered from COVID infection, after onset of illness, a positive PCR indicates persistent shedding of viral RNA than infections. In that case -

- I. If the person is asymptomatic during that period, then retesting will not yield useful information even if that person was in close contact with infected person, and
- II. If that person is symptomatic, then evaluation will fail to identify SARS-CoV-2 infection. In this situation of evaluation, person should be allowed to isolate after coming in close contact with an infected person.

CDC has recommended following based on current ongoing pandemic: -

- I. Duration of isolation and precautions.
  - i. Isolation and precautions should be discontinued after 10 days of onset of symptoms, resolution of fever for at least 24 hours without using any fever reducing medications and improvement of other symptoms also.

<sup>44</sup> <https://english.jagran.com/india/coronavirus-pandemic-what-is-covid19-containment-zone-how-is-it-created-and-what-restrictions-are-imposed-10010483>

<sup>45</sup> <https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html>

- ii. Isolation and precaution should be extended up to 20 days after symptom onset for the person with severe illness, and
  - iii. The person who never develops symptoms should discontinue their isolation after 10 days of their first positive RT-PCR test for SARS-CoV-2 RNA.
- II. Role of PCR testing to discontinue isolation or precautions.
- i. Person with impaired immune system should consult with infectious disease experts for test-based strategy.
  - ii. For all others, it is not recommended.
- III. Role of PCR testing after discontinuation of isolation or precautions.
- i. Retesting within three months after the date of onset of symptom is not recommended for the person who remain asymptomatic even after recovery.
  - ii. Retesting should be done in case the person develops new symptoms during 3 months after the onset of the initial symptom.
  - iii. For the person who never develops symptoms, the date of first positive test should be used in place of date of symptom onset.
- IV. Role of serologic testing.
- It should not be used to test the presence or absence of SARS-CoV-2 infection or reinfection.

## 4.3 Workplace

### 4.3.1 MoHFW<sup>46</sup>

Offices have resumed opening in different phases. It is important to prevent infection at workplace. The workplaces have shared spaces like corridors, parking places, cafeteria, conference halls, meeting rooms, elevators, stairs, closed loop ventilation etc, which increases the risk of transmission. Extra care thus must be taken to limit the spread of infection. This document describes the preventive and response measures to be observed to contain the spread of COVID-19 in office settings. The document is divided into the following subsections:-

- I. Generic preventive measures to be followed at all times
- II. Measures specific to offices
- III. Measures to be taken on occurrence of case(s)
- IV. Disinfection procedures to be implemented in case of occurrence of suspect/confirmed case.

Offices in containment zones shall remain closed except for medical & essential services. Only those outside containment zones are allowed to open. The details about preventive measure to contain spread of COVID-19 in offices can be accessed at the following link:-

[https://www.mohfw.gov.in/pdf/1SoPstobefollowedinOffices.pdf#\\_blank](https://www.mohfw.gov.in/pdf/1SoPstobefollowedinOffices.pdf#_blank)

<sup>46</sup> <https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>

<p><b>Basic Preventive Measure</b></p>  <p><b>Preventive measures for offices</b></p>  <p><b>Measures to be taken on occurrence of case(s)</b></p>	<ul style="list-style-type: none"> <li>➤ Employees should be asked to monitor their health and report any illness at the earliest</li> <li>➤ Use of face mask, maintaining physical distance of at least 1 meter and frequent hand washing when hands are dirty with soap for 40-60 seconds or with alcohol based sanitizer, should be strictly followed.</li> <li>➤ One should strictly follow respiratory etiquettes.</li> </ul> <hr style="border-top: 2px dashed orange; margin: 10px 0;"/> <ul style="list-style-type: none"> <li>➤ Guidelines issued by DoPT should be followed <a href="https://www.mohfw.gov.in/pdf/PreventivemeasuresDOPT.pdf">https://www.mohfw.gov.in/pdf/PreventivemeasuresDOPT.pdf</a></li> <li>➤ If any staff suffering from flu like symptoms, should not attend the office and seek medical advice.</li> <li>➤ If any staff if diagnosed with suspect/confirmed case, he/she should immediately inform the office authorities.</li> <li>➤ If any staff stays in containment zone, he/she should be permitted to work from home.</li> </ul> <hr style="border-top: 2px dashed orange; margin: 10px 0;"/> <ul style="list-style-type: none"> <li>➤ When one or few person suffer from COVID-19, then follow the preventive measure mentioned in the link given below <a href="https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacestettings.pdf">https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacestettings.pdf</a></li> <li>➤ If cases are in large numbers then essential principles of risk assessment, isolation, quarantine, case referral and management will remain same but scale of arrangements will be higher.</li> </ul>
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Figure 35: Basic preventive measures at workplaces and offices etc.

#### 4.3.2 WHO Advisory<sup>47</sup>

The World Health Organization (WHO) has released the ‘getting your workplace ready’ for COVID-19 guide in response to the outbreak of the new coronavirus disease. WHO has also advised on how to prevent the transmission of COVID-19 at workplace and guide contains low-cost measures below will help prevent the spread of infections in the workplace, such as colds, flu and stomach bugs, and protect customers, contractors and employees. The details about the advisory can be accessed at the following link: -.

<https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf>

<sup>47</sup> [https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7\\_6](https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6)

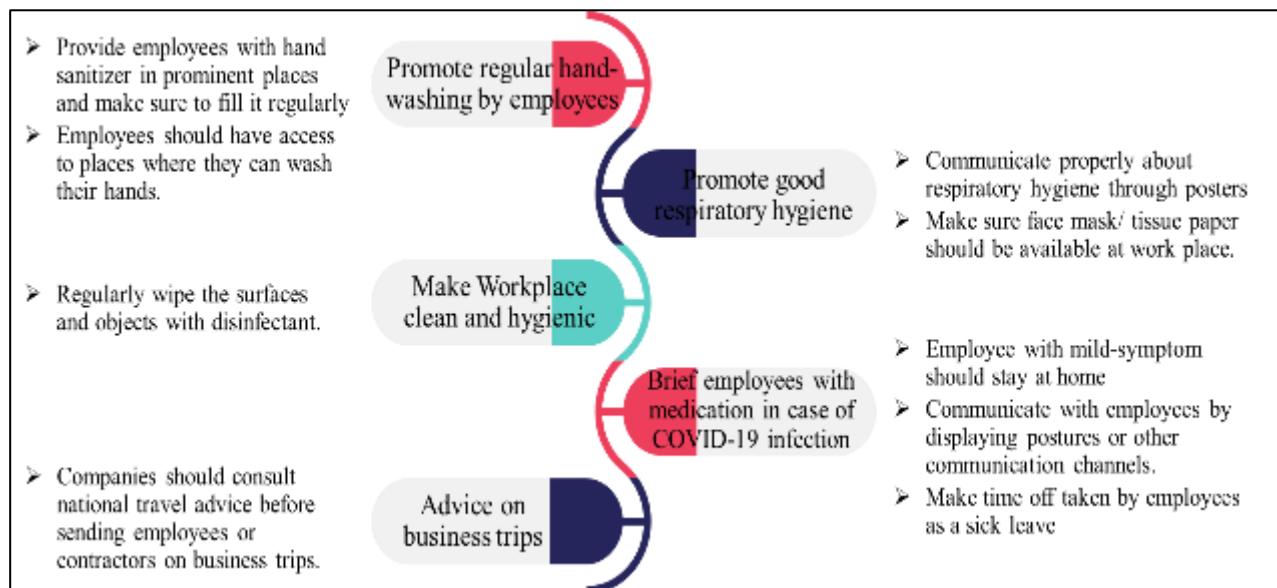


Figure 36: Ways to prevent COVID-19 in workplace

## 4.4 Preventive measure at School<sup>48</sup>

The Coronavirus outbreak has been declared as a Public Health Emergency of International Concern (PHEIC). The virus does not differentiate between age, gender, boundaries, disability status, ethnicities etc. At a time like this, the protection of children is of utmost important. This crisis has given the children an opportunity to cultivate compassion and increase resilience while building a more safe and caring community. It is indeed the responsibility of school administrators, teachers and staff, parents, caregivers, and community members to promote a healthy environment and safety at schools. The details about preventive measure to contain spread of COVID-19 in schools can be accessed at the following link: -

[https://www.who.int/docs/default-source/coronavirus/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52\\_4](https://www.who.int/docs/default-source/coronavirus/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52_4)

### 4.4.1 MoHFW

The Government of India<sup>49</sup> has permitted the re-opening of schools and coaching institutions, outside the Containment Zones after 15<sup>th</sup> October, 2020, in a graded manner. However, the States have the authority to decide whether they want to resume schools or not. While many States, including Delhi, Karnataka, Chhattisgarh and Maharashtra, have decided not to reopen schools, others like Punjab and Uttar Pradesh have announced reopening of schools. Based on their

<sup>48</sup> [https://www.who.int/docs/default-source/coronavirus/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52\\_4](https://www.who.int/docs/default-source/coronavirus/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020.pdf?sfvrsn=baf81d52_4)

<sup>49</sup> <https://www.livemint.com/news/india/schools-reopen-from-tomorrow-15-october-what-states-have-decided-11602660866608.html>

assessment of the situation and the following conditions. The detailed infographic is given below:

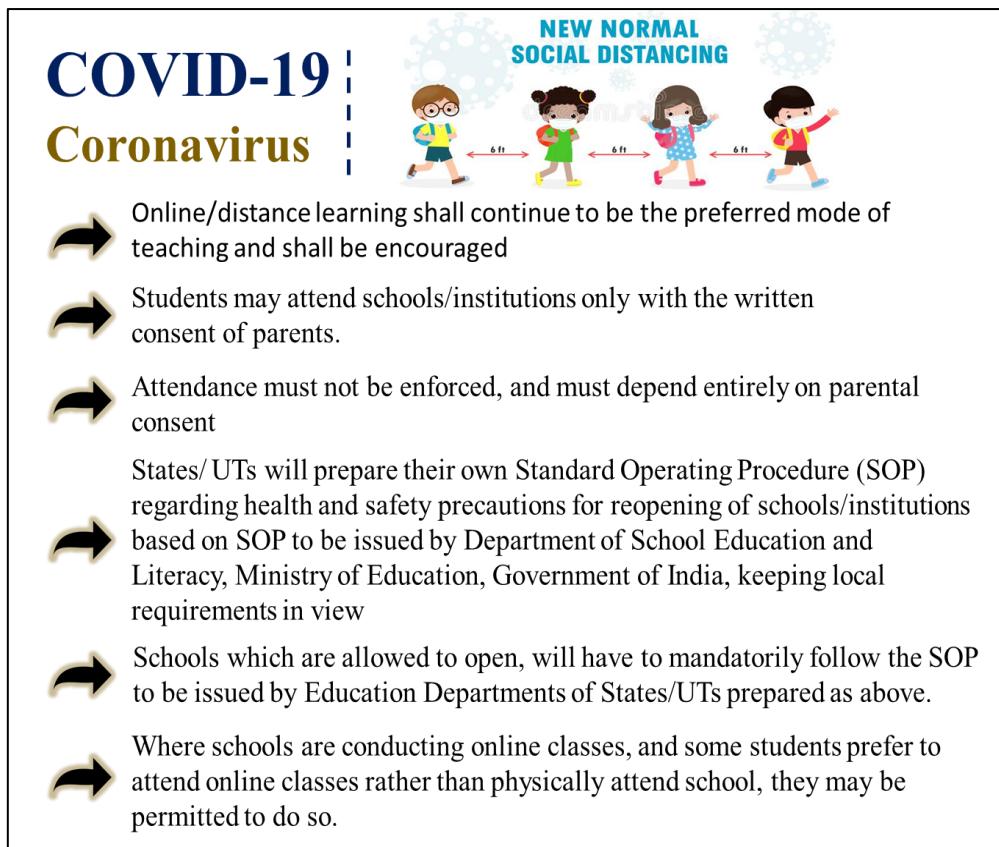


Figure 37: Guidelines for school reopening

## 4.5 Colleges and Universities

### 4.5.1 MOHFW

On 08 September 2020, the Union Health Ministry has resumed the teaching/ training activities in skills or entrepreneurship training institutions, higher educational institutions conducting doctoral courses and post graduate studies in technical & professional programs which require laboratory/ experimental work. The ministry asked educational institutes to implement staggered classroom activities with separate time slots, mandatory six feet distance between desks and carry out disinfection of premises, among other COVID-19 safety measures. The details guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/FinalSOPonSkillinstitutions&PGinstitutes08092020.pdf>

### 4.5.2 Considerations for Institutes of Higher education<sup>50</sup>

The risk of COVID-19 increases as more people interact with each other. Thus, in these institutes, management must ensure that faculty and students should engage in virtual learning options,

<sup>50</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html>

activities and events. Students should keep in mind that the risk of transformation increases by sharing objects and by not maintaining the space of at least 6 feet. Colleges and universities must keep following things in mind and make it mandatory for everyone to follow: -

- I. Promote behaviours that reduce the spread of COVID-19.
- II. Maintain healthy environments.
- III. Maintain healthy operations.
- IV. Prepare for when someone gets sick.

#### 4.5.3 Guidance for Administrators of Institutions of Higher Education<sup>51</sup>

Institute of higher education (IHE) can work together with the local health department and protect the life of the students, staff and teachers by taking appropriate steps at the right time.



Figure 38: Precautionary measure at Upper secondary school

<sup>51</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-ihe-response.html>

## **COVID-19 | When there is no community transmission (preparedness phase)**

- Review, update, and implement emergency operations plans (EOPs).
- Develop information-sharing systems with partners.
- Reinforce healthy hygiene practices.
- Intensify cleaning and disinfection efforts.
- Monitor and plan for absenteeism.
- Assess group gatherings and events. Consider postponing non-critical gatherings and events.
- Require sick students, staff, and faculty to stay home. Establish procedures for students, staff, and faculty who are sick (with any illness) on campus.
- Ensure IHE health clinics prepare for COVID-19.
- Create plans to communicate accurate and timely information to the IHE community.
- Review CDC's guidance for businesses and employers.

*Figure 39: When There is No Community Transmission in IHE*

## **COVID-19 | When there is minimal to moderate community transmission**

- Coordinate with local public health officials.
- Implement multiple social distancing strategies.
- Consider ways to accommodate the needs of students and staff at higher risk of severe illness with COVID-19..
- Ensure continuity of safe housing.
- Help counter stigma and promote resilience on campus.

### **When there is substantial community transmission**

- Continue to coordinate with local public health officials.
- Consider extended in-person class suspension.

*Figure 40: When There is Minimal to Moderate Community Transmission in IHE*

#### 4.5.4 Testing in Institutions of Higher Education<sup>52</sup>

CDC has offered ways by which the institute of higher education can prevent the spread of COVID-19 infection. Following are the different scenarios given: -

- I. Testing individuals with signs or symptoms consistent with COVID-19: -
  - i. Conduct daily temperature screening/symptom checking of students, staff, and faculties. It will lower the transmission of COVID-19.
  - ii. Separate students, staff, and faculties with COVID-19 symptoms from the rest of the people by offering isolation rooms, other housing facilities, providing alternative food service arrangements, and providing distance learning options.
  - iii. The institutes can offer the option to go to their place of residence, healthcare facility, or designated isolation housing facility. Individuals must be encouraged to see the emergent symptoms and to seek emergency medical care if symptom occurs.
- II. Testing asymptomatic individuals with recent known or suspected exposure to a person with COVID-19: -

Expand the testing of the individual who were in the close proximity of COVID-19 positive individual. There might be some student who may not know each other but they might have shared spaces which make them more prone to this disease.
- III. Testing asymptomatic individuals without known exposure to a person with COVID-19: -

CDC does not recommend the testing of returning faculties, students, and staff but some institutes of higher studies consider the option of implementing strategies. They should consider the following approaches.

  - i. There should be limited number of dedicated professionals for this testing procedure.
  - ii. There must be acceptability from the students, staff and faculties and their families for this test.

#### 4.5.5 Guidance for Student Foreign Travel<sup>53</sup>

Institutes of Higher education should cancel their upcoming student international travel program as they might face issues due to unpredictable circumstances like travel restrictions, challenges while returning home, and accessing health care etc. They should evaluate the risk associated with the host country and they should also check about COVID-19 related entry requirements in the destination country.

### 4.6 Religious places<sup>54</sup>

On June 8, the Unlock Phase 1 allowed the opening of hotels, restaurants, and places of worships outside containment zone. The Ministry of Health and Family Welfare had issued detailed guidelines on the preventive measures that were required to be taken to prevent the coronavirus transmission. The Government emphasized on social distancing to stop the spread of Covid-19.

<sup>52</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/ihe-testing.html>

<sup>53</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/student-foreign-travel.html>

<sup>54</sup> <https://www.mohfw.gov.in/pdf/2SoPstobefollowedinReligiousPlaces.pdf>

Religious places shall also ensure that entrance will have mandatory hand hygiene (sanitizer dispenser) and thermal screening provisions and only asymptomatic persons shall be allowed in the premises and only individuals wearing face mask/ cover are to be allowed to enter. The premises should have separate markings, with sufficient distance, to allow people to follow social distancing norms. Along with that, there should be separate entry and exit point for visitors. People with co-morbidities, pregnant women, and children below 10 years of age, person above 65 years of age were advised to stay at home. The following are the generic preventive measures issued by the government. The detailed infographic is given below: -

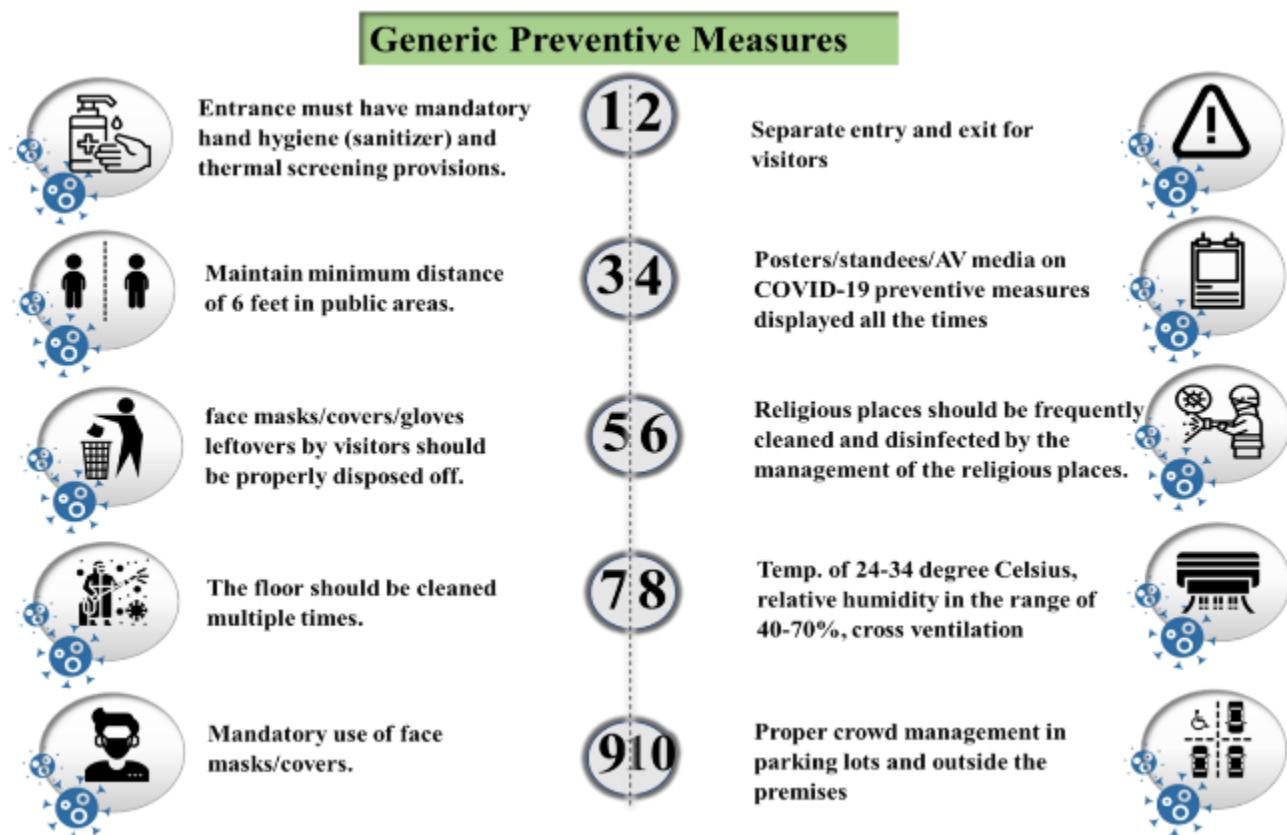


Figure 41: Preventive Measures at Religious Places

## 4.7 Hotels & Restaurants<sup>55</sup>

Hospitality industry has got affected drastically by the spread of COVID-19 infection. With the Unlock phase I, hotels and other accommodation units have been allowed to operate by strictly following basic safety norms of social distancing. The travel industry has created a draft guideline by taking inputs from health ministry. The draft cites protocols for check-ins and checkout-outs, room and common area cleaning, room allocation process and in-room provisions, food services etc. Only hotels outside the containment zone are allowed to open. Persons above 65 years of

<sup>55</sup> <https://www.mohfw.gov.in/pdf/5SoPstobefollowedinHotelsandotherunits.pdf>

<https://www.mohfw.gov.in/pdf/3SoPstobefollowedinRestaurants.pdf>

age, those with comorbidities, pregnant women and children below the age of 10 years are advised to stay at home, except for essential and health purposes. The Government aims to minimize all possible physical contacts between Staff and Guests and maintain social distancing and other preventive and safety measures against COVID-19.

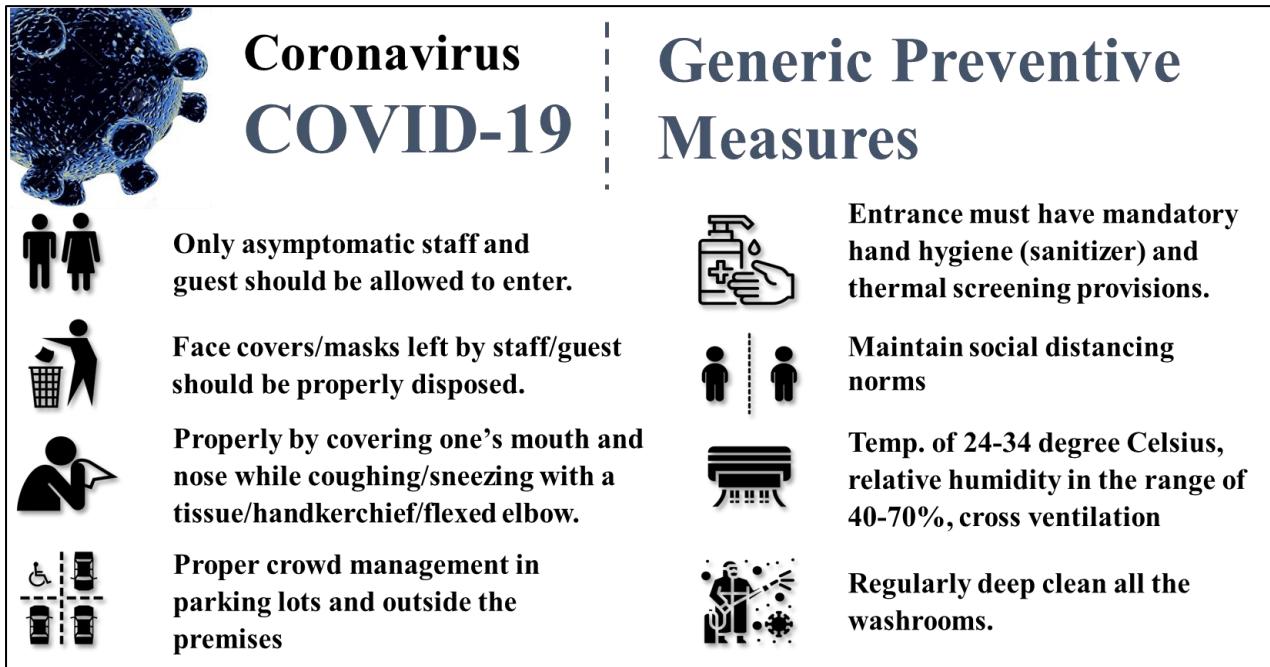


Figure 42: Generic preventive measures at hotels and restaurants

## 4.8 Shopping Malls<sup>56</sup>

A shopping mall is frequently visited by large number of people, it is important to follow social distancing and other preventive measures to prevent the spread of coronavirus. The risk of transmission in such a place is high. Government has advised various precautionary measures for shopping malls to control the transmission of COVID-19. Person with co-morbidities, pregnant women, children, and person above 65 years of age are advised to stay at home. Shopping malls in containment zones shall remain closed. Generic measure are the simple public health measures that should be followed to reduce the risk of COVID-19. Shopping malls are also advised to follow the measures which are mentioned below as depicted in the infographic below: -

<sup>56</sup> <https://www.mohfw.gov.in/pdf/4SoPstobefollowedinShoppingMalls.pdf>

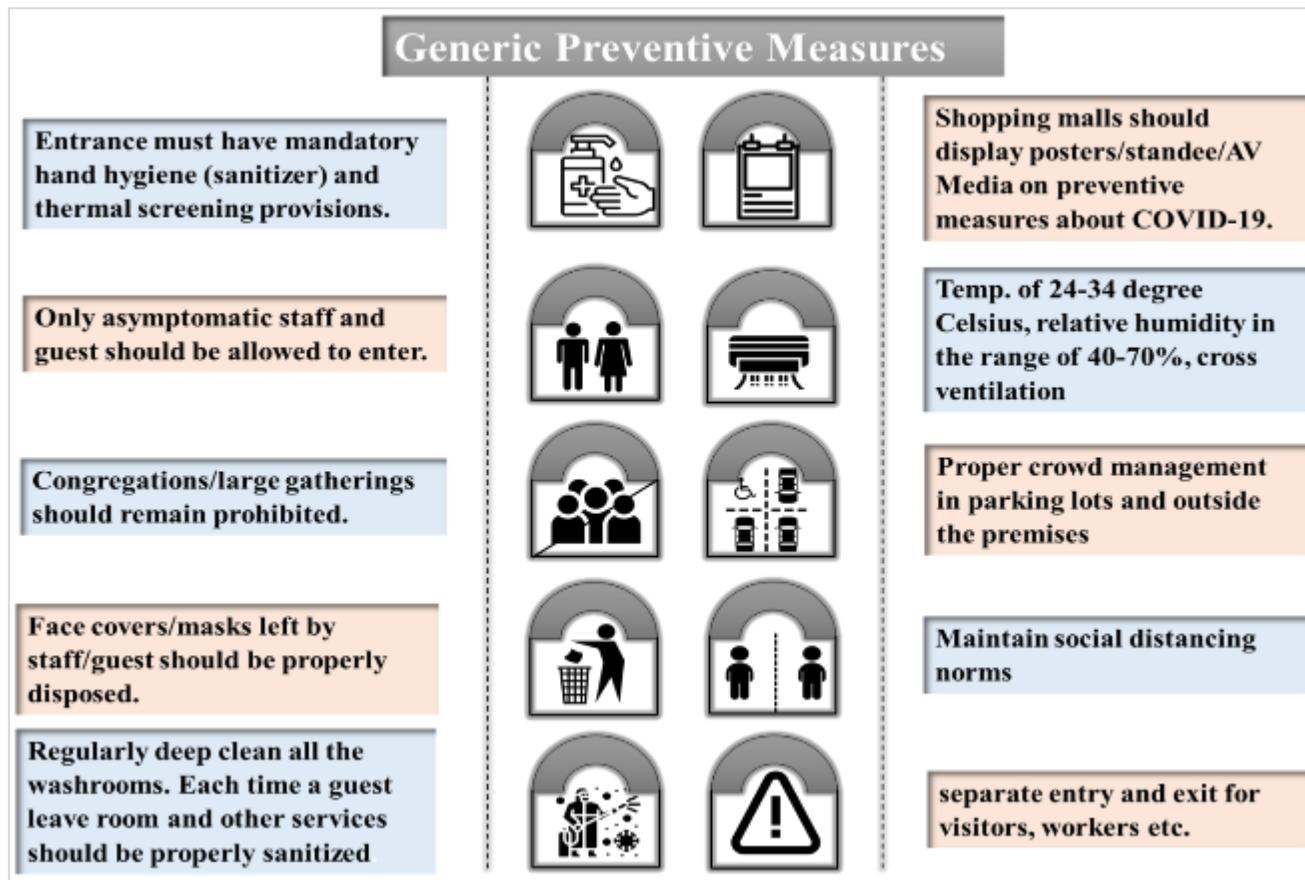


Figure 43: Generic Preventive measures at Shopping malls

## 4.9 Gatherings and Community Events<sup>57</sup>

Social distancing and self-isolation are important aspects that need to be kept in mind in any community event or social gathering. In India, different States have imposed different restrictions on the number of people who can attend gatherings like marriage, funeral etc. Community event planners and officials can collaborate with State and local health officials, where they can make adjustment according to the needs and circumstances of the local community. Organizers should continue to assess the situation and based on the current conditions they can postpone, cancel, or reduce the number of attendees as required. Guiding Principles for gathering and community events are mentioned below: -

- I. Promote healthy behaviors that reduces spread.
  - i. Stay home when appropriate.
  - ii. Hand hygiene and respiratory etiquette.
  - iii. Cloth face coverings should be strongly encouraged with proper use.
  - iv. Adequate supply of soap, water, paper towels, hand sanitizer etc.
  - v. Signs & Messages about behavior that prevent spread of COVID-19.

<sup>57</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/large-events/considerations-for-events-gatherings.html>

- II. Maintain Healthy environment
  - i. Clean and disinfect frequently touched surfaces.
  - ii. Do not allow crowds near the restroom.
  - iii. Make sure to use proper ventilation equipment.
  - iv. Make sure all water systems and features are properly working.
  - v. Multiple entrance and exits to limit the crowded waiting areas.
  - vi. Make seating arrangement in such a way that 6 feet distance can be maintained.
  - vii. Avoid any self-serve food like buffet, consider pre-packaged boxes only.
  - viii. People should not share items that are difficult to clean, sanitize or disinfect.
- III. Maintain healthy Operation
  - i. Regularly update themselves about local or State regulatory agency policies related to group gatherings.
  - ii. Make use of flexible worksites and work hours so that the number of employees and staff can be limited, and social distancing can be maintained.
  - iii. Develop policies for return-to-work after employee has COVID-19.
  - iv. Conduct virtual training on all safety protocols so that social distancing is maintained during training also.
  - v. Conduct daily health check-ups of staff and attendees safely.
- IV. Preparing when someone gets sick
  - i. In case if someone gets sick, advise that individual to stay at home.
  - ii. Staff should immediately inform event planners if they are tested for COVID-19, become sick or exposed COVID-19 patients.
  - iii. Ensure safe transportation of sick person to their home or to a healthcare facility.
  - iv. Clean and disinfect the area used by the sick person.
  - v. Notify local health officials, staff, and attendee by maintaining the confidentiality as required by applicable laws and regulations.

#### 4.10 Parks and recreational facilities<sup>58</sup>

Parks and recreational facilities like spas, playground equipment, athletic, and other exercise facilities etc. provide an opportunity for physical exercise. People use these spaces to keep themselves physical fit. Hence, the Union Health Ministry, on 08 Oct 2020, has issued guidelines for Entertainment Parks and similar places to contain the spread of COVID-19. To prevent spread of COVID-19 infection, it is important that required physical distancing and other preventive measures are followed in these places. There is a need to take precautions at these places as there is a high risk of transmission of the virus in such places. Entertainment Parks and similar places in Containment Zones shall remain closed. Persons above 65 years of age, persons with comorbidities, pregnant women and children below the age of 10 years are advised to stay at home. The details about preventive measure for Entertainment Parks and similar places can be accessed at the following link: -

<sup>58</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/parks-rec/index.html>

<https://www.mohfw.gov.in/pdf/SOPonpreventivemeasurestobefollowedinEntertainmentParksa ndsimilarplacestocontainspreadofCOVID19.pdf>

## 4.11 Shared housing and institutions<sup>59</sup>

People living in shared housing and institutions have many challenges. Shared dining, shared equipment, stairs, elevators etc. are the spaces which are commonly used. Thus, social distancing becomes difficult to follow. State, local authorities and public health departments are the best to look up to for updates and accordingly one can incorporate preventive measures. Following measures can also be taken to prevent the spread of COVID-19: -

### 4.11.1 Encourage residents to take necessary preventive measures

- I. Maintain social distancing by staying 6 feet away from others and cover you face with cloth coverings/ mask.
- II. Limit non-essential volunteers, visitors in shared areas, staff's entering to residents' rooms unless it is required.
- III. Communicate and aid staff and residents, including persons with disabilities. Suggest them to keep updated list of medications and ensure that there is sufficient supply of prescription and over the counter medicines.
- IV. Make residents aware of the symptoms of COVID-19 and they should know who to ask for help.

### 4.11.2 Consideration of common spaces, to prevent the spread of COVID-19

- I. Cancel all public or non-essential group activities and events.
- II. Use multiple strategies to maintain social distancing in the common space of the facility.
- III. During shared meals and other events arrange table and chairs in such a way that they help maintain 6 feet distance between people.
- IV. There must be a good air flow from an air conditioner or an opened window in the shared rooms.
- V. Work with building maintenance staff to determine if building ventilation system can be modified to increase ventilation rates that circulates into the system.

### 4.11.3 Consideration for shared space

- I. Shared kitchens and dining rooms
  - i. Restrict the number of people in the kitchen so that social distance of 6 feet can be maintained.
  - ii. Do not share eating utensils. Handle non-disposable food items with gloves and wash them with hot water or in a dishwasher.
  - iii. Do not forget to use gloves while handling and disposing trash and removing garbage bags.

<sup>59</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/shared-congregate-house/guidance-shared-congregate-housing.html>

- II. Laundry rooms
  - i. Maintain adequate supplies of laundry facilities to help prevention of COVID-19.
  - ii. Restrict the number of people in the laundry to maintain the social distance of 6 feet.
  - iii. Provide resident and staff with disposable gloves, EPA-registered disinfectants to clean and disinfect handles of laundry machines, doorknobs, laundry baskets etc.
- III. Activity and exercise rooms
  - i. Restrict the number of people allowed at one time in activity room to ensure that they keep 6 feet distance between them.
  - ii. Activities and sports that require close contact should not be recommended. It's important to close the exercise rooms.
- IV. Pools
 

It can be challenging to keep surface clean and disinfected so it's better to close pools and hot tubs or may allow limited access only. Maintaining social distance is paramount and this should be addressed in pool or the hot tub area.
- V. Shared bathrooms
  - i. Shared bathrooms should be cleaned regularly using EPA registered disinfectant twice a day
  - ii. Make sure to have an adequate supply of soap, paper towels, automated hand dryers and hand sanitizers etc.
  - iii. Empty the trash regularly.
  - iv. In bathrooms, provide information about how to wash hand properly.
  - v. Sinks can be a source of infection and residents should be instructed to not keep their toothbrushes on counter surfaces.

#### 4.12 Basic Preventive Measures in Daily Life

The best way to prevent infection is to avoid being exposed to the virus. This can be achieved by practicing it on a daily basis. We have mentioned below the precautions that one can take in our daily activities and help us and our closed ones from getting infected from novel Coronavirus.



Figure 44: Basic preventive measure in daily life

#### 4.12.1 Preventive Measures at Home

Houses are the safest place in the world, where one can keep safe and can do so by following preventive measures mentioned below: -

- I. Household Checklist<sup>60</sup>
  - i. Take everyday preventive actions
  - ii. Be updated about COVID-19 and make a list of organizations you can contact in case you need support
  - iii. Take extra precaution for the ones who are at higher risk of illness.
  - iv. Treat pets as household member and do not let them interact with other outside people.
- II. Living in Close Quarters<sup>61</sup>
  - i. Separate member who is sick and take extra care of them by following basic preventive guidelines.
  - ii. Member who is at high risk of illness should avoid caring for children.
  - iii. Only one or two member who is at low risk should run for essential errands.
- III. Living in shared housings<sup>62</sup>
  - i. Protect yourself by following basic preventive measures.
  - ii. Be aware of symptoms of COVID-19 and know who to ask for help.
  - iii. Provide basic COVID-19 supplies in common areas.
  - iv. Access of the people in shared areas should be restricted and do not share eating utensils.
- IV. Cleaning your home<sup>63</sup>
  - i. Disinfect house with EPA registered household disinfectant.
  - ii. For cleaning electronics follow manufacturer's instruction.
  - iii. Keep separate bedroom and bathroom for sick people.
  - iv. For routine cleaning wear reusable and disposable gloves.
- V. Food and COVID-19<sup>64</sup>
  - i. Clean and disinfect kitchen counters, high touch surfaces, light switches, doorknobs etc. regularly with commercially available disinfectant product.
  - ii. Do not use disinfectant on food packaged in plastic or cardboard.
- VI. Pets and other animals<sup>65</sup>
  - i. If your pet is sick talk to veterinary doctor regularly and keep them separate from other people and pets at home.

<sup>60</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/checklist-household-ready.html>

<sup>61</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/living-in-close-quarters.html>

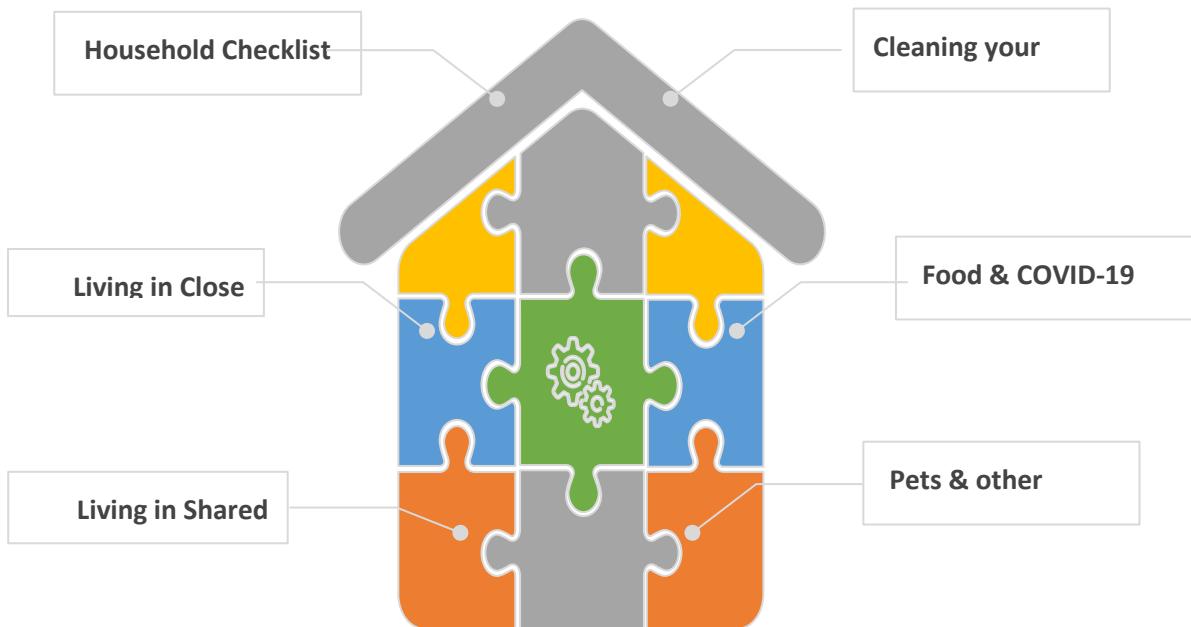
<sup>62</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/shared-housing/index.html>

<sup>63</sup> <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html>

<sup>64</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/food-and-COVID-19.html>

<sup>65</sup> <https://www.cdc.gov/coronavirus/2019-ncov/animals/pets-other-animals.html>

- ii. Monitor their symptoms and protect yourself while caring for a sick pet.
- iii. When your pet is safe to roam, end home isolation.



*Figure 45: Important points to consider while taking preventive measure at home*

#### 4.12.2 Errands & Going Out<sup>66</sup>

As businesses are opening, daily activities have also resumed. To ensure zero infection there is a need to understand potential risk and way to adopt different types of preventive measures. One should always follow the basic guidelines issued by the government by maintaining the distance of 6 feet and wearing face masks everywhere and every time one steps outside their home for delivery/ take out, grocery shopping, banking, getting gas etc.

#### 4.12.3 Caring for Children

Throughout the world, fewer children have been reported with COVID-19 infection. However, it doesn't mean that care and precaution is not required. It is of utmost priority to prevent the spread of COVID-19 in children by developing a plan and monitor the absenteeism among the staff, assess group gatherings and events and review plans for social distancing strategies<sup>67</sup>.

In India<sup>68</sup> The Union government has permitted the reopening of schools and colleges where students and teachers will be at a higher risk when they interact in classes and during activities/ events as compared to while interacting on virtual classes. Schools should consider implementing many strategies like cleaning and disinfecting, proper ventilation system, discouraging sharing of items, modified layout to ensure students sit at least 6 feet distance apart etc. to maintain a healthy and a safe environment in school.

<sup>66</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/essential-goods-services.html>

<sup>67</sup> <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-childcare.html#General>

<sup>68</sup> <https://indianexpress.com/article/explained/how-and-when-will-schools-reopen-what-will-change-for-students-6704619/>

When parents come to drop-off or pick-up their kids, they should be provided with hand sanitizer at the entrance of the facility. Similarly screen children when they arrive. The details about this can be accessed at the link given below: -

<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-childcare.html#pickup>

#### 4.12.4 Stress & Coping

During this disaster people are experiencing multiple losses due to unemployment, not making enough money, loss in support services or loss of loved ones. People cope with their losses in different ways; some can heal easily some take time. In such a situation it becomes necessary to take care of mental health. One can either find a healthcare provider for their illness or they can seek other ways like acknowledging their losses and developing new routines to start their journey again. When a person is distressed, they can start taking alcohol<sup>69</sup>. They must be suggested to contact healthcare providers and take proper medication. Social distancing measure is keeping people at home. People<sup>70</sup> who are victim of domestic violence have less access to the outside contacts. If you know someone who is victim of such violence, you can help by guiding them to a healthcare provider or the authorities. Similarly, there is a need to watch the changes in the behaviour of children<sup>71</sup>, teens<sup>72</sup> and young adults and give them the best support they need.



Figure 46: Emotional challenges during COVID-19 pandemic

<sup>69</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/alcohol-use.html>

<sup>70</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/abuse.html>

<sup>71</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/for-parents.html>

<sup>72</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/young-adults.html>

#### 4.12.5 Funeral Guidance

Grieving on the loss of a loved one is overwhelming and during this pandemic it is difficult to grieve and honor the loved ones. The detail of the precautionary measure that should be taken during such a situation has been mentioned by the Centers for Disease Control and Prevention and can be accessed at the link given below: -

<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/funeral-guidance.html>

#### 4.12.6 Contact Tracing<sup>73</sup>

Contact Tracing helps in slowing down the process of spreading of COVID-19. It is basically used by health department to stop the spread of the disease by tracing the people who are infected with COVID-19 or have come in contact of a COVID-19 infected person. Once people are traced, they are encouraged to maintain social distance and home quarantine themselves. Also, they are required to monitor their COVID-19 symptoms and check temperature twice on daily basis.

### 4.13 Basic Preventive Measure at Residential Complexes

The government of India has also issued preventive guidelines for residential complexes as residential welfare associations (RWA) can play an important role in creating awareness about the disease and encourage people to follow preventive measure and people should be aware of generic guidelines that must be followed everywhere. If cases have occurred, they should be encouraged to self-report their symptoms. Public health authority might advise for home isolation, in that case RWAs must facilitate those who are quarantined at home and provide any social support needed. The government has also instructed RWAs to cooperate with local health authorities in case they are declared as containment zone. The details about preventive measure for gated complex can be accessed at the following link: -

<https://www.mohfw.gov.in/pdf/AdvisoryforRWAsonCOVID19.pdf>

### 4.14 Basic preventive measure at yoga centers and gyms

The Ministry of Health and Family Welfare has issued a set of preventive measures to contain the spread of Covid-19 in yoga institutes and gyms. They have allowed yoga centers and gyms to function from 5 August 2020. Due to the closed environment and sharing of equipment by multiple users, they were considered as places vulnerable to the spread of COVID-19. They are now required to follow laid down protocols and other generic preventive measures as well as specific measures mentioned in the document to stop the spread of COVID-19. They should comply with health-related guidelines issued by State/ Union government from time to time. We have already mentioned generic preventive measures in our previous section and specific guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/Guidelinesonyogainstitutesandgyms03082020.pdf>

<sup>73</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/contact-tracing.html>

Before opening the yoga institutes/gymnasiums	
	Place equipment 6 feet apart to facilitate social distancing
	Plan yoga/gymnasiums floor area based on 4m <sup>2</sup> per person.
	Ensure 6 feet distance between personal trainer and clients
	Promote card based/contactless payment.
	Ensure dustbins and trash cans are covered at all times
	Air conditioning devices should be in the range of 24-30°C, relative humidity should be in the range of 40- 70%.
	Lockers will remain in use, as long as social distancing is maintained.
	Spas, Sauna, Steam Bath and Swimming Pool (wherever applicable) shall remain closed.
	Shifts and attendance to be planned to ensure social distancing
	Utilize outdoor spaces at where available
After opening the yoga institutes / gymnasiums	
	Entrance to have mandatory hand hygiene and thermal screening provisions.
	All persons to be allowed entry only if using face cover/masks.
	All members, visitors and staff to use Aarogya Setu
	Ensure minimum distance of 6 feet at all times in queues
	shoes / footwear are to be preferably taken off outside the premises
	Hand sanitizer stations must be provided near each gymnasium equipment
	Remove mask and wear visor as far as feasible while exercising.
	Common exercise mats should be avoided. Shouting/ laughter yoga exercise should not be allowed
	The floor cleaning shall be taken up between exercise sessions.
	Deep cleaning of all washrooms shall be ensured. Before closure, the entire premises will be disinfected

Figure 47: Preventive measures before opening and after opening the yoga institutes

#### 4.15 Basic preventive measure at Market Places

The Union Health Ministry, on 30 Nov 2020, has issued guidelines for markets to contain spread of COVID-19. These include levying of fines/penalties on defaulters for not wearing mask/face cover, or for not following physical distancing norms, exploring option of allowing markets/shops to open on alternate days and possible incentive/ discounts for those who shop during non-peak hours. Marketplaces are visited by large number of people for their daily needs, shopping, entertainment, and food. Amid COVID pandemic, with gradual opening of economic activities, markets are witnessing high footfalls. Such large gatherings, without observance of COVID19 appropriate behaviour have the potential to spread Coronavirus infection. These guidelines shall be applicable to both retail and wholesale markets. Market places in containment zones shall remain closed. Persons above 65 years of age, persons with comorbidities, pregnant women, and children below the age of 10 years are advised to stay at home, except for essential and health purposes. Market Owners Associations shall be advised accordingly. The details about preventive measure for Market Places can be accessed at the following link: -

<https://www.mohfw.gov.in/pdf/30NovSOPonpreventivemeasuresinmarketstocontainspreadofCOVID19.pdf>

# 5 Government Guidelines & Regulations

## 5.1 Ministry of Health and Family Welfare (MoHFW)

The countrywide lockdown, which commenced on 24 Mar 2020 was lifted on 08 Jun 2020. In continuation of Unlock phases, MHA has issued several fresh guidelines, applicable w.e.f 01 December 2020, for containment of COVID 19 pandemic. The subsequent sub-sections cover latest relevant government issued guidelines and their respective links for detailed information.

### 5.1.1 Guidelines for Surveillance, containment and caution

On 25 November 2020, Ministry of Home Affairs has issued fresh guidelines for surveillance, containment and caution, in the view of rise in cases in some states and UTs.

Detailed guidelines could be accessed at:-

<https://www.mha.gov.in/sites/default/files/MHAOrder25112020.pdf>

### 5.1.2 Unlock Phase 5 Guidelines

Ministry of Home Affairs had issued Unlock 5 guidelines on 30 Sept 2020, which were previously extended up to 30 Nov 2020. As of today, there is no such extension that has been announced however, it is understood that the same guidelines would be in force for the current period as well. Amplifying restrictions/ guidelines have been placed/ referenced in the succeeding paragraphs. The details with regards to Unlock 5 guidelines can be accessed at the link given below: -

[https://www.mha.gov.in/sites/default/files/MHAOrderDt\\_30092020.pdf](https://www.mha.gov.in/sites/default/files/MHAOrderDt_30092020.pdf)

## COVID-19 UNLOCK 5

## Centre Permits More Activities In Areas Outside Containment Zones

- Cinemas/ theatres/ multiplexes will be permitted to open with up to 50% of their seating capacity.
- Entertainment parks and similar places will be permitted to open from 15 October, 2020.
- Swimming pools used for training of sportspersons will be permitted to open from 15 October, 2020.
- Business to Business (B2B) exhibitions will be permitted to open from 15 October, 2020.
- Students may attend schools/ institutions only with the written consent of parents. Attendance must not be enforced, and must depend entirely on parental consent.
- Online/ distance learning shall continue to be the preferred mode of teaching and shall be encouraged
- Social/ academic/ sports/ entertainment/ cultural/ religious/ political functions and other congregations were earlier permitted with a ceiling of 100 persons, outside containment zones. Now State/ UT Governments may permit such gatherings beyond the limit of 100 after 15 October, 2020.

### What Stays The Same:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>➤ Lockdown in containment zones</li> <li>➤ No international air travel except as permitted by MHA</li> </ul> | <ul style="list-style-type: none"> <li>➤ Vulnerable persons above 65, people with comorbidities, pregnant women, children under 10 advised to stay home.</li> </ul> |
|---|---|

Figure 48: Unlock 5.0 guidelines

#### 5.1.3 State wise Guidelines

In continuation of Unlock 5.0 guidelines issued on 30 Sep 2020 several States have issued fresh guidelines/ rules for the containment of the pandemic. for The State specific guidelines could be accessed at the website of the respective States.

#### 5.1.4 SOP for resumption of swimming training of sports persons in COVID-19 environment

The SOP issued by MHA which is applicable to both SAI and non-SAI centers wherein the training of sportspersons may resume. The details can be accessed from the below link: -

[https://static.mygov.in/rest/s3fs-public/mygov\\_160248988251307401.pdf](https://static.mygov.in/rest/s3fs-public/mygov_160248988251307401.pdf)

#### 5.1.5 SOP on preventive measures to be followed in Entertainment Parks and similar places to contain spread of COVID-19

MHA has stated various generic and precautionary measures to be adopted in addition to specific measures which need to be ensured at Entertainment parks and similar places to prevent the transmission of COVID-19. The details can be accessed from the link given below: -

<https://www.mohfw.gov.in/pdf/SOPonpreventivemeasurestobefollowedinEntertainmentParksa ndsimilarplacestocontainspreadofCOVID19.pdf>

### 5.1.6 SOP on preventive measures to contain the spread of COVID-19 during festivities

In India, October to December are the months of festivals, which witness large gatherings of people. In order to prevent the spread of COVID-19 the Ministry of Home Affairs issued necessary preventive measures to be followed, the details of which can be accessed from the link below: -

<https://www.mohfw.gov.in/pdf/StandardOperatingProceduresonpreventivemeasurestocontainpreadofCOVID19duringfestivities.pdf>

### 5.1.7 SOP on preventive measures in markets to contain spread of COVID-19

On 30<sup>th</sup> November 2020, Ministry of Health and Family Welfare, has issued fresh SOPs for the exercise of preventive measure in market places to contain spread of COFID-19.

Detailed SOPs could be accessed at:-

<https://www.mohfw.gov.in/pdf/30NovSOPonpreventivemeasuresinmarketstocontainspreadofCOVID19.pdf>

### 5.1.8 Guideline on managing mental illness in hospital settings during COVID-19

Ministry of Health and Family Welfare has issued guidelines on managing mental illness in hospital settings during COVID-19. The guidelines can be accessed from the link given below: -

<https://www.mohfw.gov.in/pdf/GuidelinesforDeliveryofMentalMentalHealthcareServicesduringheCOVID19.pdf>

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

The Ministry of Health and Family Welfare has issued guidelines on 13 October 2020 to provide guidance on prevention and treatment of co-infections of COVID-19 with diseases like Dengue, Malaria, seasonal Influenza (H1N1), Leptospirosis, Chikungunya etc.

The details of the guidelines can be accessed from the link given below: -  
<https://www.mohfw.gov.in/pdf/GuidelinesformanagementofcoinfectionofCOVID19withotherseasonalepidemicpronerdiseases.pdf>

### 5.1.10 Post COVID management protocol

On 13 Sept 2020, the Ministry of Health and Family Welfare has issued post COVID management protocol, for follow up care and well-being of all post COVID recovering patients.

<https://www.mohfw.gov.in/pdf/PostCOVID13092020.pdf>

### 5.1.11 Revised SOP on preventive measures to be followed while conducting examinations to contain spread of COVID19

The Ministry of Health and Family Welfare on Sept 10, 2020 issued revised Standard Operating Procedures (SOPs) on preventive measures to be followed while conducting examinations to contain the spread of coronavirus. Detailed SOP can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/RevisedSOPonpreventivemeasurestobefollowedwhileconductingexaminationstocontainspreadofCOVID19.pdf>

### 5.1.12 SOP for partial reopening of Schools for students of 9th to 12th classes on a voluntary basis, for taking guidance from their teachers: In the context of COVID-19

On Sept 08, 2020 Ministry of Health & Family Welfare has issued SOP for partial reopening of schools for classes 09<sup>th</sup> to 12<sup>th</sup> on a voluntary basis, for taking guidance from their teachers. Detailed SOP can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/FinalSOPonpartialresumptionofactivitiesinschools8092020.pdf>

### 5.1.13 SOP on preventive measures to contain spread of COVID-19 in skill or entrepreneurship training institutions, higher educational institutions conducting doctoral courses and post graduate studies in technical & professional programs requiring laboratory /experimental work

On Sept 08, 2020, the Ministry of Health and Family Welfare has issued SOP to enable safe resumption of teaching/ training activities in skill or entrepreneurship training institutions, higher educational institutions conducting doctoral courses and post graduate studies in technical & professional programs requiring laboratory /experimental work. Detailed SOP can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/FinalSOPonSkillinstitutions&PGinstitutes08092020.pdf>

### 5.1.14 Advisory on Strategy for COVID-19 Testing in India.

The Ministry of Health and Family Welfare has issued advisory on COVID-19 testing in India both in containment zones and non-containment zones. The details about this guideline can be accessed from the below link: -

<https://www.mohfw.gov.in/pdf/AdvisoryonstrategyforCOVID19TestinginIndia.pdf>

### 5.1.15 FAQs on COVID-19 from AIIMS e-ICUs

The health ministry, along with the All India Institute of Medical Sciences (AIIMS), has prepared a set of frequently asked questions (FAQs) to answer queries. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/AIIMSeICUsFAQs01SEP.pdf>

### 5.1.16 Guidance on Bi-directional TB-COVID screening and screening of TB among ILI/ SARI cases

The Ministry of Health and Family Welfare (MoHFW) has issued a guidance on bi-directional TB-Covid screening and screening of TB among influenza like illness (ILI) and severe acute respiratory infections (SARI) cases. As per the Union Health Ministry, COVID-19 screening for all diagnosed Tuberculosis (TB) patients and TB screening for all COVID-19 positive patients should be conducted. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/1TBCOVIDscreeningguidancenote.pdf>

### 5.1.17 Clinical Guidance on Diabetes Management at COVID-19 Patient Management Facility

The Ministry of Health and Family Welfare (MoHFW) has issued Clinical Guidance on Diabetes Management at COVID-19 Patient Management Facility on 26 August 2020.

At the outset, it highlights the following two important points:

- I. Every patient must be screened at admission for hyperglycaemia with at least two capillary blood glucose values (1 pre-meal and 1 post-meal value) by a glucometer.
- II. Every patient with diabetes should be started on a diabetic diet. The patient must strictly adhere to the timing and quantity advised in the diet chart.

The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/ClinicalGuidanceonDiabetesManagementatCOVID19PatientManagementFacility.pdf>

### 5.1.18 Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario

To minimize the spread of Covid-19 in eye care facilities, the health ministry has issued guidelines that encourage teleconsultations and following an appointment system for those needing investigation and procedures. According to the 'Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario', eye drops should be put in the patient's eye by a nursing or paramedical staff with a no touch technique. The ministry also says that eye care facilities in containment zones shall be closed. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/GuidelineforEyeCare.pdf>

### 5.1.19 Guidance on Bi-directional TB-COVID screening and screening of TB among ILI/ SARI cases

The Ministry of Health and Family Welfare (MoHFW) has issued a guidance on bi-directional TB-Covid screening and screening of TB among influenza like illness (ILI) and severe acute respiratory infections (SARI) cases. As per the Union Health Ministry, COVID-19 screening for all diagnosed Tuberculosis (TB) patients and TB screening for all COVID-19 positive patients should be conducted. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/1TBCOVIDscreeningguidancenote.pdf>

### 5.1.20 Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario

To minimize the spread of Covid-19 in eye care facilities, the health ministry has issued guidelines that encourage teleconsultations and following an appointment system for those needing investigation and procedures. According to the 'Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario', eye drops should be put in the patient's eye by a nursing or paramedical staff with a no touch technique. The ministry also says that eye care facilities in containment zones shall be closed. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/GuidelineforEyeCare.pdf>

### 5.1.21 Extension of Pradhan Mantri Garib Kalyan Package; insurance scheme for healthcare workers fighting COVID-19

As on June 26, the central government has extended the insurance scheme announced under the Pradhan Mantri Garib Kalyan Package for health workers fighting to contain COVID-19 for another three months. The insurance has been extended for a further period of 90 days beyond 30<sup>th</sup> June 2020 i.e. till 28<sup>th</sup> September 2020. The details of the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/PMGKPIInsuranceextensionletter.pdf>

### 5.1.22 Guidelines on Preventive Measure to Contain Spread of COVID-19 in Yoga Institutes & Gymnasiums

This guideline provides the various precautionary and safety measures to be adopted at yoga institutes and gyms. The details of the guidelines can be accessed at the link given below : - <https://www.mohfw.gov.in/pdf/Guidelinesonyogainstitutesandgymnasiums03082020.pdf>

### 5.1.23 Revised guidelines for International arrivals

Ministry of Health and Family Welfare has issued fresh guidelines for international traveler 05 November 2020 . The details about complete guidelines can be accessed at the link given below : -

<https://www.mohfw.gov.in/pdf/05112020Guidelinesforinternationalarrivals.pdf>

### 5.1.24 Advisory for Gated residential Complexes with regards to COVID-19

MoHFW has issued advisory for gated residential complexes. Resident welfare associations of the gated complex can play an important role in creating awareness about COVID-19. The details of the advisory can be accessed below: -

<https://www.mohfw.gov.in/pdf/AdvisoryforRWAsonCOVID19.pdf>

### 5.1.25 Guidelines for Gated Residential Complexes desirous of setting up Small COVID Care Facility by Residential Welfare Association / Residential Societies / Non-Government Organization (NGOs)

The community in gated complexes may like to create a small COVID Care facility within the residential complex in collaboration with an NGO. This will help in reducing the burden on existing facilities for managing pre-symptomatic, asymptomatic, mild cases or suspected cases of COVID-19. The complete details about the guidelines can be accessed at the link given below: -

<https://www.mohfw.gov.in/pdf/CovidCareFacilityinGatedcomplexes.pdf>

### 5.1.26 Guidance for General Medical and Specialized Mental Health Care Settings

The National Institute of Mental Health and Neurosciences (NIMHANS) has come out with guidance for general medical and specialized mental health care settings, noting that the COVID-19 outbreak threatens to weaken the already fragile mental health system across the country. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/COVID19Final2020ForOnline9July2020.pdf>

### 5.1.27 Protocol on Clinical Management of COVID-19 patients

The Union Health Ministry issued guidelines (version 5) on clinical management protocol for COVID-19 patients on July 03, 2020. The revised protocol lowered the dosage schedule of investigational drug Remdesivir from six days to five days now. The drug is allowed under emergency use authorization and may be considered for patients with moderate disease (those on oxygen). The drug cannot be administered to a pregnant or a lactating mother and children below the age of 12 years. Also, the patient should not have renal problems. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

### 5.1.28 Guidelines for Home Isolation of Very Mild/ Pre-Symptomatic/ Asymptomatic COVID-19 Cases

The Union health ministry has revised the home isolation guidelines for coronavirus positive cases on July 02, 2020. The fresh guidelines for home isolation now include asymptomatic positive patients in the list of mild or pre-symptomatic coronavirus infection cases. However, patients suffering from immune-compromised status (like HIV, transplant recipients, cancer therapy) are not eligible for home isolation. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/RevisedHomelsolationGuidelines.pdf>

### 5.1.29 Guidelines for Setting Up Isolation Facility/ Ward

The National Centre for Disease Control, an institute under the Indian Directorate General of Health Services, Ministry of Health and Family Welfare, has issued guidelines on setting up isolation facility/ wards. The guidelines define quarantine as separation of individuals who are not yet ill but have been exposed to COVID-19 and therefore have a potential to become ill. There will be voluntary home quarantine of contacts of suspect/ confirmed cases. Isolation refers to separation of individuals who are ill and suspected or confirmed of COVID-19. All suspect cases detected in the containment/ buffer zones (till a diagnosis is made), will be hospitalized and kept in isolation in a designated facility till such time they are tested negative. The detailed guidelines can be accessed here: - <https://ncdc.gov.in/showfile.php?lid=503>

### 5.1.30 Guidelines for Quarantine Facilities COVID-19

The government has issued guidelines on setting up quarantine facilities amid the COVID-19 pandemic. These facilities should preferably be set up on the outskirts of cities and arrangements should be such that interactions between the quarantined people and healthcare professionals or supporting staff is minimized. During that period, contacts should be monitored at least daily for fever and respiratory symptoms. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/90542653311584546120quartineguidelines.pdf>

### 5.1.31 Guidelines for Blood Transfusion Services

The National Blood Transfusion Council of the Ministry of Health and Family Welfare has issued the second interim national guideline for blood transfusion services in the country in the light of COVID-19 pandemic, which stresses on safe functioning of blood transfusion services. The guideline covers various aspects of blood transfusion services, including the functioning of blood

banks and volunteering of donors. The guideline directs blood banks for exclusion of donors, who are in the risk category to maintain safety. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/2ndNBTCGuidanceinLightofCOVID19Pandemic.pdf>

#### 5.1.32 Guidelines on Clinical Management Protocol for COVID-19 Patients

The Union Health Ministry issued guidelines (version 4) on clinical management protocol for COVID-19 patients on June 27, 2020. The health ministry has described the use of investigational therapies-Remdesivir, Convalescent plasma, Tocilizumab, and Hydroxychloroquine (HCQ) on coronavirus patients. The government has included loss of smell and taste as new symptoms of coronavirus; however, they have withdrawn the use of Azithromycin drug in the management of COVID-19 patients. Further, the use of these drugs is subject to limited availability in the country as of now.

<https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19dated27062020.pdf>

#### 5.1.33 Guidelines on COVID Appropriate Behaviors

In India, COVID-19 pandemic has created lot of challenges which require collective effort and support from all. MoHFW has issued guidelines mentioning measures which are led by Central government and State government, which in the long run reinforce the preventive measures and practices to deal with the disease.

The details about guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/Illustrativeguidelineupdate.pdf>

#### 5.1.34 Advisory for Managing Healthcare Workers Working in COVID and Non-COVID Areas of the Hospitals

Health care workers are the most important resource in this situation. Their health is of utmost importance. The Ministry of Health and Family Welfare has issued guidelines for workers working in COVID and non-COVID areas of the hospital, the details of which can be accessed here: -

<https://www.mohfw.gov.in/pdf/updatedAdvisoryformanagingHealthcareworkersworkinginCOVIDandNonCOVIDareasofthehospital.pdf>

#### 5.1.35 Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Hotels

MoHFW has issued guidelines for hotels on preventive measures to contain spread of COVID-19. The detailed guidelines and SOPs can be accessed here: -

Guidelines:- <https://www.mohfw.gov.in/pdf/HotelsGuidelines11thJune.pdf>

SOPs:- <https://www.mohfw.gov.in/pdf/5SoPstobefollowedinHotelsandothereunits.pdf>

#### 5.1.36 Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Offices

With the lockdown opening in different phases, offices are also resuming. The MoHFW has issued guidelines and SOPs on preventive measures to contain spread of COVID-19. The detailed guidelines and SOPs can be accessed here: -

Guidelines:- <https://www.mohfw.gov.in/pdf/OfficesGuidelines11thJune.pdf>

SOPs:- <https://www.mohfw.gov.in/pdf/1SoPstobefollowedinOffices.pdf>

### 5.1.37 Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Religious Places

Religious places are opened from June 11. In such places people are at high risk of the corona transmission. The MoHFW has issued guidelines and SOPs with a view to prevent the spread of infection, the detailed guidelines and SOPs can be accessed here: -

Guidelines: - <https://www.mohfw.gov.in/pdf/ReligiousPlacesGuidelines11thJune.pdf>

SOPs: - <https://www.mohfw.gov.in/pdf/2SoPstobefollowedinReligiousPlaces.pdf>

### 5.1.38 Guidelines and SOPs on Preventive Measures to Contain Spread of COVID-19 in Restaurants

Various State governments have allowed opening of restaurants. In this regard, MoHFW has guidelines and SOPs for restaurants and other hospitality units, advising them to take suitable measures to restrict any further transmission of the virus while providing restaurant services. The detailed guidelines and SOPs can be accessed here: -

Guidelines: - <https://www.mohfw.gov.in/pdf/RestaurantsGuidelines11thJune.pdf>

SOPs: - <https://www.mohfw.gov.in/pdf/3SoPstobefollowedinRestaurants.pdf>

### 5.1.39 Guidelines and SOPS on Preventive Measures to Contain Spread of COVID-19 in Shopping Malls

MoHFW has issued guidelines and SOPS on preventive measures to contain spread of COVID-19 in shopping malls. The detailed guidelines and SOPS can be accessed here: -

Guidelines: - <https://www.mohfw.gov.in/pdf/ShoppingMallsGuidelines11thJune.pdf>

SOPs: - <https://www.mohfw.gov.in/pdf/4SoPstobefollowedinShoppingMalls.pdf>

### 5.1.40 Guidelines for Safe ENT Practice in COVID-19

The Union Ministry of Health and Family Welfare has issued guidelines for safe 'Ear, Nose and Throat' (ENT) practice during the COVID - 19 pandemic. The guidelines are aimed at minimizing the spread of COVID - 19 infection among ENT doctors, nursing staff, support staff, patients, and attendants. The guidelines cover the following areas: -

III. Protocols and SOPs for ENT OPD

IV. Protocol for ENT and Head & Neck Surgery Ward

V. Guidelines for Operation Theatre for ENT surgeries

The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/ENTCOVID0306.pdf>

#### 5.1.41 Advisory on Re-Processing and Re-Use of Eye Protection

PPE Kits are discarded after its use as a bio-medical waste. However, goggles being an important component of PPE Kit can be reused. The guidelines cover the standard operating procedure to re-use them. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/Advisoryonreprocessingandreuseofeyeprotectiongoggles.pdf>

#### 5.1.42 Guidelines for Domestic Travel (Air/Train/Inter-State Bus Travel)

Ministry of Health and Family welfare has issued guidelines for the passengers who are travelling domestically. The guidelines can be accessed here: -

[https://www.mohfw.gov.in/pdf/Guidelinesfordomestictravel\(airortrainorinter-statebustravel\).pdf](https://www.mohfw.gov.in/pdf/Guidelinesfordomestictravel(airortrainorinter-statebustravel).pdf)

#### 5.1.43 Guidelines on Provision of Reproductive, Material, Newborn, Child, Adolescent Health Plus Nutrition (RMNCAH+N) Services during and Post COVID-19 Pandemic

MoHFW has issued guidelines for safety and ensuring the availability and continuity of RMNCAH +N services, as any denial of these services can have an impact on maternal and newborn mortalities, morbidities as well as health care costs. They also focus on the need to enhance safe abortion services besides post-partum and post abortion practices.

The guidance notes on provision of reproductive, maternal, newborn, child, adolescent health plus nutrition services during and post COVID-19 pandemic elaborates various provided at different levels in accordance with the zonal categorization and beyond these zones.

The guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/GuidanceNoteonProvisionofessentialRMNCAHServices24052020.pdf>

#### 5.1.44 Guidelines on Preventive Measures to Contain Spread of COVID-19 in Workplace Settings

To contain the spread of COVID-19, MoHFW has issued fresh guidelines on preventive measures for workplace settings. The guidelines cover the following areas: -

- I. Basic preventive measures to be followed at all times.
- II. Measures specific to offices.
- III. Measures to be taken on occurrence of case(s).
- IV. Disinfection procedures to be implemented in case of occurrence of suspect/confirmed case.

The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>

#### 5.1.45 Guideline for RT-PCR based Pooled Sampling for Migrants/ Returnees from Abroad/ Green zones

MoHFW has issued guidelines for RT-PCR based pooled sampling for migrants/ returnees from abroad/ green zones of Covid-19. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/GuidelineforrtPCRBasedpooledsamplingFinal.pdf>

#### 5.1.46 Updated Additional Guidelines on Rational Use of Personal Protective Equipment

On 15 May 2020, Ministry of Health and Family Welfare has issued updated additional guidelines for the rational use of 'Personal Protective Equipment' (PPE) in continuation of previous guidelines. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/UpdatedAdditionalguidelinesonrationaluseofPersonalProtectiveEquipmentsettingapproachforHealthfunctionariesworkinginnonCOVID19areas.pdf>

#### 5.1.47 Updated Containment Plan for Large Outbreaks

MoHFW has issued updated containment plan for large outbreaks comprising action to be taken for containing a large outbreak, with a view to break the chain of transmission thus reducing the morbidity and mortality due to COVID-19. The detailed plan can be accessed here: -

<https://www.mohfw.gov.in/pdf/UpdatedContainmentPlanforLargeOutbreaksofCOVID19Version3.0.pdf>

#### 5.1.48 Preparedness and Response to COVID-19 in Urban Settlements

MoHFW has defined focus areas to be addressed by the 'Urban Local Bodies' for preparedness in urban settlements for responding to COVID-19. The detailed document can be accessed here: -

<https://www.mohfw.gov.in/pdf/PreparednessandresponsetoCOVID19inUrbansettlements.pdf>

#### 5.1.49 Revised Guidelines for Home Isolation of Very Mild/Pre-Symptomatic/Asymptomatic COVID-19 Cases

On 02 July 2020, Ministry of Health and Family Welfare has issued a revised guideline for home isolation of very mild/ pre-symptomatic/ asymptomatic COVID-19 cases, in supersession of the earlier guidelines issued on 10 May 2020. The detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/RevisedHomelocationGuidelines.pdf>

These guidelines cover the following sections:

- I. Patients eligible for home isolation
- II. When to seek medical attention
- III. Role of State/District Health Authorities
- IV. When to discontinue home isolation
- V. Annexure I - Undertaking on self-isolation
- VI. Annexure II - Instruction for caregivers and instruction for the patient

### 5.1.50 Guidelines on Disinfection of Common Public Places Including Offices

These guidelines are issued to provide guidance about the environmental cleaning/decontamination of common public places including offices in areas reporting COVID-19. Detailed guidelines can be accessed here: -

<https://www.mohfw.gov.in/pdf/GuidelinestobefollowedondetectionofsuspectorconfirmedCOVID19case.pdf>

### 5.1.51 Guidelines to be followed on Detection of Suspect/ Confirmed COVID-19 case in a Non COVID Health Facility

On 20 April 2020, Ministry of Health and Family Welfare has issued guidelines to be followed on detection of suspect/ confirmed COVID-19 case in a non COVID health facility. Detailed guidelines can be accessed at below appended link: -

<https://www.mohfw.gov.in/pdf/GuidelinestobefollowedondetectionofsuspectorconfirmedCOVID19case.pdf>

These guidelines cover the following sections: -

- I. Institutional arrangement
  - i. Action to be taken on detection of COVID -19 case in non-COVID health facility
  - ii. When a suspect/confirmed COVID-19 HCW is identified
- II. Decision on further /continued use of non-COVID facilities where a single/multiple COVID-19 case has been reported
- III. Follow up actions

### 5.1.52 Guidelines for Notifying COVID-19 Affected Persons by Private Institutions

In the wake of the prevailing COVID-19 situation and in order to strengthen the containment measures, it is of utmost importance that each and every case (suspects/ confirmed) of COVID-19 is isolated and provided appropriate treatment and their contacts are traced at the earliest to break the chain of transmission. It is important that support and cooperation of private sector is enlisted, in this regard. Any organization suspecting a person to be infected is required to encourage the person to call the helpline number, who would then be taken through a triaging protocol to ascertain the risk and the nearest facility to visit according to the risk category that the person falls in. Link to find details about the guidelines can be accessed here-

<https://www.mohfw.gov.in/pdf/GuidelinesfornotifyingCOVID-19affectedpersonsbyPrivateInstitutions.pdf>

### 5.1.53 Additional Guidelines for Quarantine of Returnees from Abroad / Contacts / Isolation of Suspect or Confirmed Cases in Private Facilities

On May 07, 2020, Ministry of Health & Family Welfare has issued additional guidelines for quarantine of returnees from abroad / contacts / isolation of suspect or confirmed cases in private facilities. Details about the guidelines can be accessed here-

<https://www.mohfw.gov.in/pdf/Additionalguidelinesforquarantineofreturneesfromabroadcontactsisolationofsuspectorconfirmedcaseinprivatefacilities.pdf>

Further guidelines for quarantine have been issued wherein the travellers are required to make their own arrangement for stays during the quarantine period. The travellers are required to stay in quarantine on payment basis. States have identified hotels for the ‘quarantine stay’. List of hotels identified in Mumbai, Delhi, Kolkata, Chennai, Bangalore, and Noida is tabulated below (this is an ongoing process and the tabulated list below may not be up to date).

#### List of Hotels for Quarantine

Sr. No	City	Hotels
1	Mumbai	The Lalit Mumbai, The Renaissance, Taj Santacruz, Hotel Nirane, Hilton Mumbai International, Hotel Hayatt, Radisson, Hotel JW Marriott, Hotel T24 Retro, Hotel T24 Residency, Lemon Tree Premier, Hotel Suncity Residency, Hotel Mumbai House, Sai Palace Hotel, Keys select Hotel, Hotel Ram Krishna, Hotel Nishita
2	Delhi	Lemon Tree Hotel, Lemon Tree Premier, Red Fox , IBIS Hotel, Mirage Hotel, Hotel Marriott, Hotel Pullman, Hotel Novotel, Hotel Aloft, Holiday Inn, Pride Plaza, Hotel Park Plaza, Hotel Sopan Heights, Hotel Royal Holidays, Hotel Pooja Palace, Hotel C Park, Hotel Kyron, Hotel Grand, Welcome Hotel, Piccadilly Hotel
3	Kolkata	Hotel Red Velvet Inn, Hotel Eco Stay, Hotel Stay Inn, Durbar Guest House, Hotel Lemon Tree, Hotel Ginger
4	Chennai	Oyo Hotel Town House
5	Bangalore	Sabarwal Residency, Emirates Hotel, Empire Hotel, Silicrest, Oyo Amethyst, Ramakrishna Lodge, Hotel Citadel, Likith International, Fortune Park JP Celestial, Arafaa Inn, Lemon Tree Premier, Keys Select, Chalukya Hotel, Sri Lakshmi PG, Trinity Wood Hotel, Keys Select Whitefield
6	Noida	Radisson Blu, Greater Noida. Savoy Suits, Greater Noida, Stellar Gymkhana, Greater Noida, Hotel Hyatt, Fairfield Marriott, Hotel Picadilly, Lemon Tree, Ginger Madgaon, Ginger City Centre

Figure 49: List of Hotels for quarantine

#### 5.1.54 Guidelines for Home Quarantine<sup>74</sup>

Ministry of Health & Family Welfare has issued guidelines for home quarantine on March 11, 2020. These guidelines are developed for home quarantine of contacts of a suspect or confirmed case of COVID-19. Details about the guidelines can be accessed here <https://www.mohfw.gov.in/pdf/Guidelinesforhomequarantine.pdf>

#### 5.1.55 Guidance Document on Appropriate Management of Suspect/ Confirmed Cases of COVID-19: Railway Coaches as COVID-19 Care Centre

MoHFW has taken out guidelines for management of suspect/ confirmed cases of COVID-19. The guidelines also give details of 215 railway stations where the special train coaches can be placed for providing the necessary support. The guidelines can be accessed here:-

<sup>74</sup> <https://www.mohfw.gov.in/pdf/Guidelinesforhomequarantine.pdf>

<https://www.mohfw.gov.in/pdf/GuidanceDocumentonappropriatemanagementofsuspectconfirmedcasesofCOVID19RailwayCoachesCOVIDCareCenters.pdf>

## 5.2 Airport Authority of India

### 5.2.1 State wise quarantine regulations for domestic passengers

On October 20, 2020, Airport Authority of India (AAI) has issued new State wise quarantine regulations for domestic and international passengers. Though conditions are changing every day, so one must check the website of the respective States.

The details about the guidelines can be accessed from the link given below: -

[https://www.aai.aero/sites/default/files/aaupload/Updated-State-wise-Quarantine-Guidelines-as-on-20.10.2020\\_0.pdf](https://www.aai.aero/sites/default/files/aaupload/Updated-State-wise-Quarantine-Guidelines-as-on-20.10.2020_0.pdf)

## 5.3 Delhi Metro Guidelines

The Delhi Metro Rail Corporation (DMRC) has issued new guidelines on September 02, services will be resumed in a graded manner in three stages from 7th to 12th September 2020 as given below:

-  
<http://www.delhimetrorail.com/PressReleaseDocuments/PRESS-RELEASE-02092020.pdf>

<http://www.delhimetrorail.com/corona/guidelinesforpassenger.aspx>

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## **COVID-19 Coronavirus**

## **Graded Resumption of DELHI METRO SERVICES :**

### **STAGE – 1**

**7th, 9th, 10th  
September 2020  
onwards**

### **STAGE – 2**

**11th September  
2020 onwards**

### **STAGE – 3**

**12th September  
2020 onwards**

Stages	Date of resumption of Metro Services	Line(s) on which Metro services resuming	Passenger service Timings
<b>STAGE – 1 </b> <b>7th, 9th, 10th September 2020 onwards</b>	7 <sup>th</sup> September 2020 onwards	→ Line -2 ( <b>Yellow Line</b> ) From Samaypur Badli to HUDA City Centre & <b>Rapid Metro</b> , Gurugram	MORNING (4 Hours only) <b>(7 AM to 11 AM)</b> EVENING (4 Hours only) <b>(4 PM to 8 PM)</b>
	9 <sup>th</sup> September 2020 onwards	→ Line – 3/4 ( <b>Blue Line</b> ) from Dwarka Sec – 21 to Noida Electronic City/ Vaishali & → Line – 7 ( <b>Pink Line</b> ) from Majlis Park to Shiv Vihar	MORNING (4 Hours only) <b>(7 AM to 11 AM)</b> EVENING (4 Hours only) <b>(4 PM to 8 PM)</b>
	10 <sup>th</sup> September 2020 onwards	→ Line -1 ( <b>Red Line</b> ) from Rithala to Shaheed Sthal, → Line – 5 ( <b>Green Line</b> ) from Kirti Nagar/ Inderlok to Brig. Hoshiar Singh → Line – 6 ( <b>Violet Line</b> ) from Kashmere Gate to Raja Nahar Singh	MORNING (4 Hours only) <b>(7 AM to 11 AM)</b> EVENING (4 Hours only) <b>(4 PM to 8 PM)</b>
<b>STAGE – 2 </b> <b>11th September 2020 onwards</b>	11 <sup>th</sup> September 2020 onwards	→ In the addition to stage – 1 Lines, Line – 8 ( <b>Magenta Line</b> ) from Janakpuri West to Botanical Garden & → Line – 9 ( <b>Grey Line</b> ) from Dwarka to Najafgarh will be also made operational	MORNING (6 Hours only) <b>(7 AM to 1 PM)</b> EVENING (6 Hours only) <b>(4 PM to 10 PM)</b>
<b>STAGE – 3 </b> <b>12th September 2020 onwards</b>	12 <sup>th</sup> September 2020 onwards	→ In addition to stage – 1 & 2 Lines, <b>Airport Express</b> Line from New Delhi to Dwarka Sec – 21 will be also operational	Services will be available throughout the day <b>(6 AM to 11 PM)</b> On all lines

Figure 50: Graded Resumption of Metro Lines

## 5.4 Guidelines for Restarting Manufacturing Industries after Lockdown

In order to minimize the risk and to encourage a successful restart of the industrial units, National Disaster Management Authority (NDMA) has issued guidelines for restarting manufacturing industries post lockdown. Details can be accessed here-

<https://ndma.gov.in/images/covid/Guidelines-for-restarting-industrial-units-after-lockdown.pdf>

## 5.5 Securities and Exchange Board of India (SEBI)

### 5.5.1 Relaxation in timelines for compliance with regulatory requirements

SEBI has further extended timelines for compliance with various regulatory requirements by the trading members/ clearing members/ depository participants till December 31, 2020.

The details can be accessed here: -

[https://www.sebi.gov.in/legal/circulars/oct-2020/relaxation-in-timelines-for-compliance-with-regulatory-requirements\\_47778.html](https://www.sebi.gov.in/legal/circulars/oct-2020/relaxation-in-timelines-for-compliance-with-regulatory-requirements_47778.html)

### 5.5.2 Review of provisions regarding valuation of debt and money market instruments due to COVID-19 pandemic

SEBI has done modification to SEBI circular dated 24, September 2019, which will be in force till 31 December 2020.

The details of the guidelines can be accessed from the link given below: -

[https://www.sebi.gov.in/legal/circulars/oct-2020/circular-on-review-of-provisions-regarding-valuation-of-debt-and-money-market-instruments-due-to-the-covid-19-pandemic\\_47779.html](https://www.sebi.gov.in/legal/circulars/oct-2020/circular-on-review-of-provisions-regarding-valuation-of-debt-and-money-market-instruments-due-to-the-covid-19-pandemic_47779.html)

### 5.5.3 Guidelines for Order-to-Trade Ratio (OTR) for Algorithmic Trading

SEBI has come up with guidelines on Order-to-trade ratio (OTR) for Algorithmic Trading on June 24, 2020 to all recognized Stock Exchanges (except Commodity Derivatives Exchange sand Stock Exchanges in International Financial Services Centre). The guidelines can be accessed here: -

[https://www.sebi.gov.in/legal/circulars/jun-2020/guidelines-for-order-to-trade-ratio-otr-for-algorithmic-trading\\_46925.html](https://www.sebi.gov.in/legal/circulars/jun-2020/guidelines-for-order-to-trade-ratio-otr-for-algorithmic-trading_46925.html)

### 5.5.4 Guidelines on Identification and Selection of Location as a Delivery Centre(s) for Commodity Derivatives Contract

SEBI has issued a circular to all the recognized stock exchanges and 'Clearing Corporations', which have commodity derivative segment. The detailed circular can be accessed here: -

[https://www.sebi.gov.in/legal/circulars/may-2020/guidelines-for-identification-and-selection-of-location-as-a-delivery-centre-s-for-commodity-derivatives-contract\\_46709.html](https://www.sebi.gov.in/legal/circulars/may-2020/guidelines-for-identification-and-selection-of-location-as-a-delivery-centre-s-for-commodity-derivatives-contract_46709.html)

### 5.5.5 Advisory on Disclosure of Material Impact of COVID-19 Pandemic on Listed Entities under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 ('LODR Regulations' / 'LODR')

SEBI has issued a circular to all listed entities on disclosure of material impact of COVID-19 pandemic. The detailed circular can be accessed here: -

[https://www.sebi.gov.in/legal/circulars/may-2020/advisory-on-disclosure-of-material-impact-of-covid-19-pandemic-on-listed-entities-under-sebi-listing-obligations-and-disclosure-requirements-regulations-2015\\_46688.html](https://www.sebi.gov.in/legal/circulars/may-2020/advisory-on-disclosure-of-material-impact-of-covid-19-pandemic-on-listed-entities-under-sebi-listing-obligations-and-disclosure-requirements-regulations-2015_46688.html)

## 5.6 Guidelines for Air Passengers

Goi has issued comprehensive guidelines for air passengers, which covers the following: -

- I. Do's and don'ts to be observed by air passengers from their origin to airport.
- II. Important instruction to air passengers.
- III. Guidelines for air passengers at the airport.
- IV. Guidelines for the air passengers at security check-in.
- V. Guidelines for air passengers at security hold areas.
- VI. Guidelines for air passengers while boarding.
- VII. Guidelines for air passengers while inside the aircraft.
- VIII. Guidelines for air passengers at arrival, baggage collection, exit for airport

Detailed guidelines for air passengers can be accessed here: -

[https://static.mygov.in/rest/s3fs-public/mygov\\_159004771751307401.pdf](https://static.mygov.in/rest/s3fs-public/mygov_159004771751307401.pdf)

## 5.7 Ministry of Civil Aviation (MoCA) - Order

### 5.7.1 RT-PCR testing at the entry airport for the arriving international transfer passengers

The Ministry of Civil Aviation on September 29, 2020 issued updated guidelines for RT-PCR testing at the airport for the arriving international passengers. Detailed guidelines can be accessed at the link given below:-

[PCR Testing at the entry airport dated 29\\_09\\_2020.pdf](#)

Also, through a memorandum dated October 19, 2020 the ministry has notified an upation with regards to domestic air travel guidelines. Details can be accessed at below given link:-

<https://www.civilaviation.gov.in/sites/default/files/DOC101920-10192020183946.pdf>

### 5.7.2 Recommencement of Domestic air travel w.e.f from 25 May 2020 - Updating of guidelines (meal services)

As on 27 August 2020, The Ministry of Civil Aviation has allowed the airlines to serve pre-packed snacks, meals, and beverages on domestic flights, depending on the travel time. The detailed guidelines can be accessed here: -

<https://www.civilaviation.gov.in/sites/default/files/SOP Domestic.pdf>

### 5.7.3 Recommencement of Domestic air travel w.e.f from 25 May 2020 - Updating of guidelines

Ministry of Civil Aviation had issued an order for the recommencement of domestic air travel from 25 May 2020, which has been updated on 7 August 2020, to ensure the safety of passengers during prevailing circumstances due to COVID-19 pandemic. The MoCA order has updated the following guidelines:

- I. Annexure I: General instructions for commencement of domestic air travel.
- II. Annexure II: The detailed guidelines to be followed by air passenger.
- III. Annexure III: Specific operating guidelines for major stakeholders.

Detailed guidelines can be accessed here: -

<http://www.airindia.in/images/pdf/Updation-of-Guidelines.pdf>

Subsequently on September 23, 2020 the concerned ministry has issued updated guidelines with regards to check-in baggage. The detailed guidelines can be accessed at the link given below:-

[https://www.civilaviation.gov.in/sites/default/files/DOC092320\\_09232020175724.pdf](https://www.civilaviation.gov.in/sites/default/files/DOC092320_09232020175724.pdf)

### 5.7.4 Eligibility of Passengers to travel under Air Bubbles Arrangement

Ministry of Civil Aviation has permitted certain categories of foreign nationals to enter India and Indian nationals to visit other countries. They have permitted to carry passengers (mentioned in the link given below) on the flights being operated between Indian and their respective countries.

Detailed information can be accessed here: -

<http://www.airindia.in/images/pdf/Eligibility-of-passengers-to-travel-under-air-bubbles.pdf>

## 5.8 Government of India (MyGov)<sup>75</sup>

The government has issued guidelines addressing concerns associated with air conditioning (AC) and ventilation to control the spread of coronavirus in residences, workspaces, and healthcare facilities. These may be accessed here: - <https://www.mygov.in/covid-19/>

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<sup>75</sup> [https://www.mha.gov.in/sites/default/files/MHAOrderextension\\_1752020.pdf](https://www.mha.gov.in/sites/default/files/MHAOrderextension_1752020.pdf)

## Guidelines for Operating Air Cooling & Air Conditioning Equipments



**General Guiding Principles:**

	Temperature setting of all AC devices to be in the range of 24-30° C	
	Relative Humidity to be in the range of 40-70%	
	Intake of Fresh of Air to be maximised & recirculation of air to be avoided	
	Cross Ventilation to be adequately ensured & replacement of air by use of exhaust fans	
	Frequent air sanitisation by regular cleaning & sanitisation of filters of indoor unit	
	Social distancing norms, wear masks, avoid direct contact of air flow & frequent surface decontamination to be ensured	

Figure 51: Guidelines for Operating Air Cooling and Air Conditioning Equipment

### AC Guidelines for Residences, Standalone Workspaces/ Offices (1/4)



**For areas with mild exposure & controlled environment**

**Air Cooling/ Conditioning Options:**

	Window fitted desert coolers	
	ACs ( Window/ Split)	
	Fans	
	Temperature & Humidity range to be maintained as per general guidelines	
	Max. fresh air intake by opening of doors/windows & supported by air replacement through exhaust fan facilities	

Figure 52: AC Guidelines for Residences, Standalone/Workspaces/Offices

## AC Guidelines for meeting Rooms, Dispensaries etc. (2/4)



For areas with Moderate Exposure & Concentration



### Air Cooling/ Conditioning Options:



Window fitted desert coolers



Room ACs ( Window/ Split)



VRV/VRF systems ( Indoor Units)



Fans



Temperature & Humidity range to be maintained as per general guidelines



Max. fresh air intake by opening of doors/windows & supported by air replacement through exhaust fan facilities

Figure 53: AC Guidelines for Meeting Rooms, Dispensaries etc

## AC Guidelines for institution etc (3/4)



For areas with Maximum Exposure & Concentration



### Air Cooling/ Conditioning Options:



Window fitted desert coolers



Room ACs/VRV/VRF systems



Fans



Max. fresh air intake by opening of doors/windows supported by exhaust fan facilities



Temperature & Humidity range to be maintained as per general guidelines



Avoid central AC to the extent possible, if not feasible then

- Air handling units to run on max fresh air as possible
- AHUs to run 2 hrs prior & stop 2 hrs after office time

Figure 54: AC Guidelines for Institution etc.

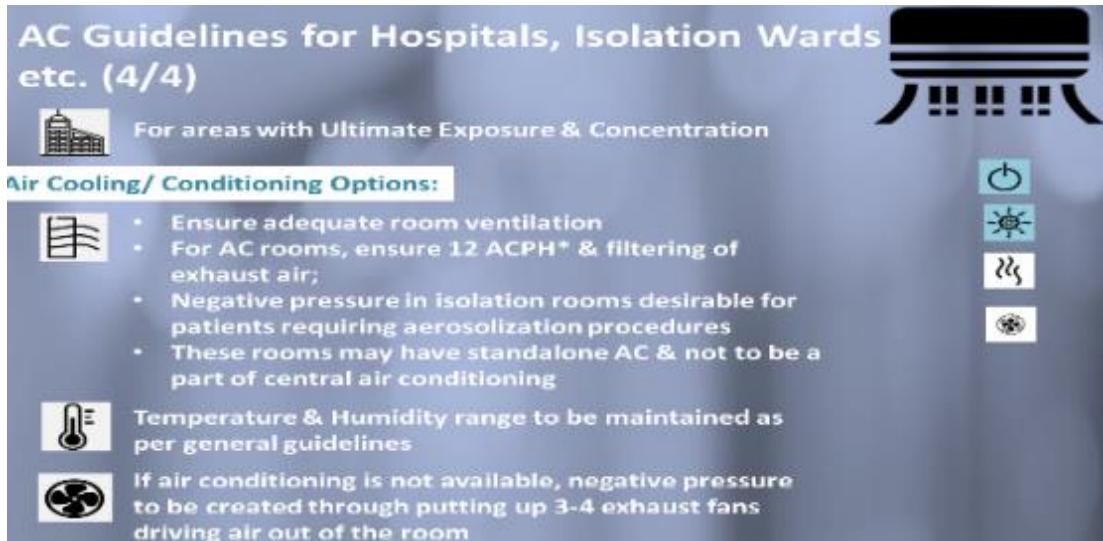


Figure 55: AC Guidelines for Hospitals, Isolation Wards etc

### 5.8.1 Standard Operating Procedures (SOPs) For India Bound Passengers under 'Air Bubble'

The embassy shared the standard operating procedures (SOPs) for India-bound passengers who want to travel between India and Japan under the air bubble arrangements. India & Japan are now part of 'Air Bubble' system. Registration of passengers with Indian Embassy in Tokyo is no longer required, and bookings should be done directly with concerned airlines. The details about the guidelines can be accessed here: -

[https://static.mygov.in/rest/s3fs-public/mygov\\_160430278551307401.pdf](https://static.mygov.in/rest/s3fs-public/mygov_160430278551307401.pdf)

## 5.9 Others

### 5.9.1 Guidelines for Inter-State Travel

The State government of all the States have issued guidelines for entry of people from other States and to their States. The details about the guidelines can be accessed here: -

<https://covidindia.org/travel-guidelines/#inter-state>

### 5.9.2 Guidelines for International Arrival

Government has issued revised guidelines for international arrival which has been effective from 8 August 2020. The details of it can be accessed here: -

<https://covidindia.org/travel-guidelines/#international>

<https://www.mohfw.gov.in/pdf/RevisedguidelinesforInternationalArrivals02082020.pdf>

### 5.9.3 SOP for Train Travel

Government has issued guidelines for train services which has begun from 01 June 2020. They have given instruction related to bedding, blankets, catering, and, also for symptomatic travellers. The details of these guidelines can be accessed here: -

<https://covidindia.org/wp-content/uploads/2020/06/Train-Travel-Guidelines-q-converted.pdf>

## Annexure 'I'- Air India Evacuation Schedule Flights

Government of India along with Air India has launched a plan phase V and phase VI from 01 August 2020 to 23 October 2020, for the evacuation of stranded person outside India. The latest schedule of the flights can be accessed from the links given below: -

- I. Air Bubble flights VBM evacuation flight schedule phase 7 (01<sup>st</sup> NOV 20 - 28<sup>th</sup> Mar21)  
<http://www.airindia.in/images/pdf/VBM-Phase-7-Sheet-B-Air-Bubble-flights.pdf>

## Annexure 'II' - Important Websites & Twitter Handles

### Websites

1. World Health Organization - [www.who.int](http://www.who.int)
2. Ministry of Health & Family Welfare - [www.mohfw.gov.in](http://www.mohfw.gov.in)
3. Ministry of Finance - [www.finmin.nic.in](http://www.finmin.nic.in)
4. Ministry of Commerce and Industry - [www.commerce.gov.in](http://www.commerce.gov.in)
5. Ministry of Civil Aviation - [www.civilaviation.gov.in](http://www.civilaviation.gov.in)
6. Centers for Disease Control and Prevention - [www.cdc.gov](http://www.cdc.gov)
7. Indian Council of Medical Research (ICMR) - <https://www.icmr.gov.in/>
8. MyGov - <https://www.mygov.in/covid-19>
9. Council for Scientific and Industrial Research (CSIR) - <https://www.csir.res.in/>
10. National Centre for Disease Control - Inputs on environmental cleaning, decontamination in quarantine facilities etc  
[https://dghs.gov.in/content/1407\\_3\\_NationalCentreforDiseaseControl.aspx](https://dghs.gov.in/content/1407_3_NationalCentreforDiseaseControl.aspx):
11. Federation of Indian Chambers of Commerce and Industry - <http://ficci.in/>
12. Confederation of Indian Industry <https://www.cii.in/>

### Twitter Handles

1. World Health Organization - @WHO
2. Ministry of Health & Family Welfare - @MoHFW\_INDIA
3. Ministry of Finance - @FinMinIndia
4. Ministry of Commerce and Industry - @CimGOI
5. Centers for Disease Control and Prevention - @CDCgov
6. Indian Council of Medical Research (ICMR) - @ICMRDELHI
7. MyGov - @mygovindia
8. Council for Scientific and Industrial Research (CSIR) - @CSIR\_IND
9. Federation of Indian Chambers of Commerce and Industry - @ficci\_india
10. Confederation of Indian Industry - @FollowCII

## Annexure 'III' - Forbes CoronaGuard

Dr. Rajesh Vijay Kumar, an Indian Bangalore based scientist has invented the Scalene Hypercharge Corona Canon (SHYCOCAN), a device that attacks and disable coronavirus. Coronaviruses are tiny structures which consist of spike protein at their outer surface. The virus uses spike proteins to attach with the negatively charged walls of host and thus make a bridge that enable them to enter the cells. It then multiplies in the throat after replicating. The product designed by Dr. Rajesh Vijay Kumar helps in disabling the bridge. It is a plug and play device that delivers the signals to a photon mediated electron emitters (PMEE), that produces hypercharge high velocity electrons. These negatively charged electrons neutralizes the positively charged proteins on every virus particle thus disabling 99.9% of virus on the surface and in the air. This device gives real-time protection against infection in closed spaces like schools, offices, malls, airports etc. Eureka Forbes has got approval from US Food and Drug Administration and the European Union.

<https://m.dailymotion.in/news/india/english/news18%20english-epaper-newseigh/bengaluru%20organisation%20gets%20us%20fda%20eu%20approval%20for%20medical%20device%20that%20can%20neutralise%20coronavirus-newsid-n201815888?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

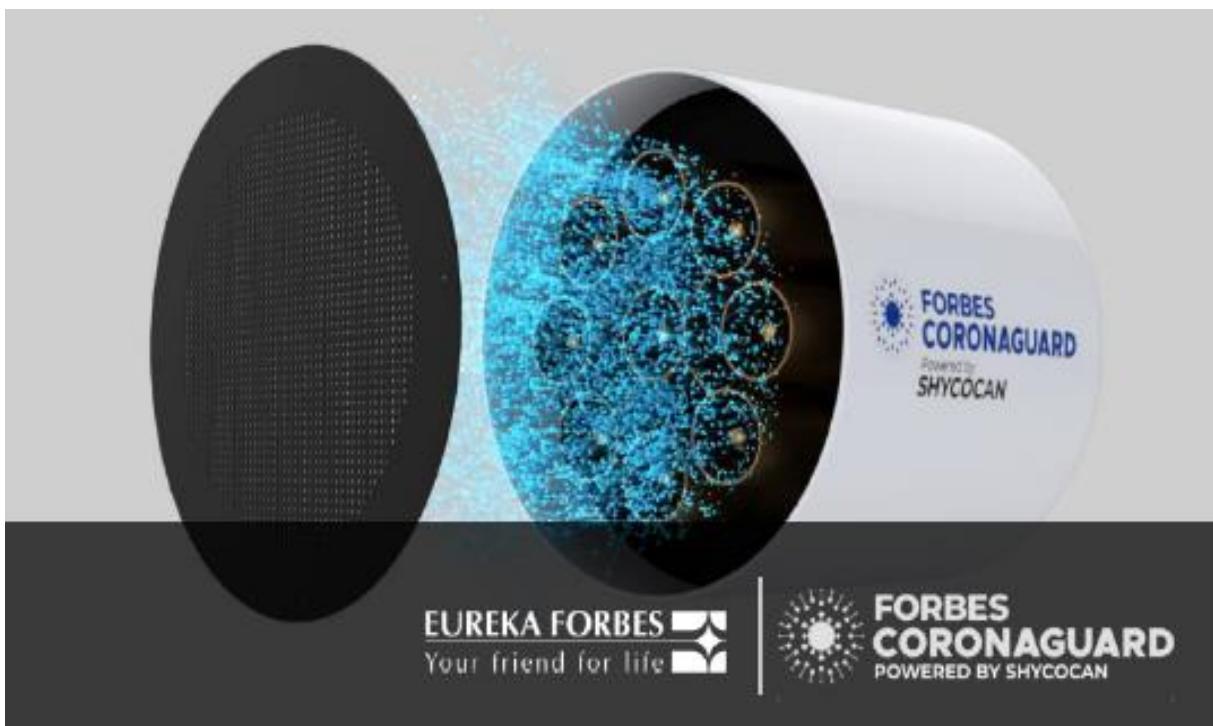


Figure 56: Eureka Forbes CORONA GUARD

SL. NO.	Parameters	Values
01	Product name	FORBES CORONA GUARD
02	Operation	Hypercharge High Velocity Electron Generation
03	Dimension	L :250 mm ID :250 mm OD :262 mm
04	Operating Voltage	110/240 V- 50/60 Hz
05	Operating Current	0.11 to 0.35 Amps
06	Estimated P-Electron Production	10 to 100 trillion per second
07	Estimated Photon Density	12 to 14 trillion per CC at 12 centimetres
08	EMI Filter	10A
09	Switching frequency	15 to 20 KHz (Dynamic)
10	Effective Area covered	1000 Sq. Feet (10,000 Cubic feet)
11	Instrument Cooling Air Flow	64 CFM
12	EHT ( EXTRA HIGH TENSION)	12KV/ 20Khz
13	Photon Emitter	PMEE
14	Applicable area	1000 Sq. Feet (10,000 Cubic feet)
15	Virtual attenuation efficiency	99.9 %*
16	Ozone Production	No **

\*(Laboratorios de Especialidades Immunological S.A. de C.V, Report NO: 44527-Virucidal Activity concludes 99.9% virus elimination, dated June 16, 2020)

\*\*The device does not produce harmful ozone gas (SSTx LLC, Report No: SHY-02-05072020, test No: SHY-2306-50-1, Issue date May 16, 2020).

Figure 57: Technical Specifications of Forbes CORONA GUARD

## Annexure 'IV'- COVID-19 Information for US Citizens Entering or Departing India

Ministry of Home Affairs (MHA), has issued new travel restrictions for foreign national entering and departing from India where they have suspended all the visas issued to nationals of any country prior to 13 March 2020 (except those issued to official passport holders, Diplomats, those in UN/International Organizations, Employments, Project Visas and those who are operating aircrew of scheduled commercial airlines). Also, the person with an urgent need to travel to India, must apply at the Indian consulate near their residence. The MHA has also provided information on airlines, departure, information on entering the U.S., U.S. travel documents etc. which can be accessed from the below link: -

<https://in.usembassy.gov/covid-19-information/>

## Annexure ‘V’- LG PuriCare Wearable Air Purifier face mask

Masks have become an integral part of all our lives amid the Covid-19 pandemic. While the work on the Covid-19 vaccine is still in progress, people have advised to maintain personal hygiene and also maintain distance between strangers during social gathering, in addition, to mandatorily wear face masks all-the-time outside of the house. LG has introduced an innovative facemask PuriCare Wearable Air Purifier that also works as a mask. The LG PuriCare Wearable Air Purifier features Dual Fans as well as includes a Respiratory Sensor. It also comes in an ergonomic design to fit comfortably on a range of facial shapes and sizes. LG’s new wearable air purifier will be showcased at IFA 2020 in September. It will make the PuriCare available by the fourth quarter of 2020, with details of pricing to be revealed at the time of its launch.



Figure 58: LG Puricare Wearable Air Purifier Mask

<https://indianexpress.com/article/technology/tech-news-technology/lg-air-purifier-mask-how-does-it-work-can-you-buy-6573061/>

<https://www.indiatvnews.com/technology/news-lg-puricare-wearable-air-purifier-smart-face-mask-design-features->

645309#:~:text=LG%20PuriCare%20Wearable%20Air%20Purifier%20comes%20with%20two%20H13%20HEPA,three%20speed%20levels%20and%20more.&text=LG%20PuriCare%20Wearable%20Air%20Purifier%20smart%20face%20mask%20will%20be,Wearable%20Air%20Purifier%20face%20mask.

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