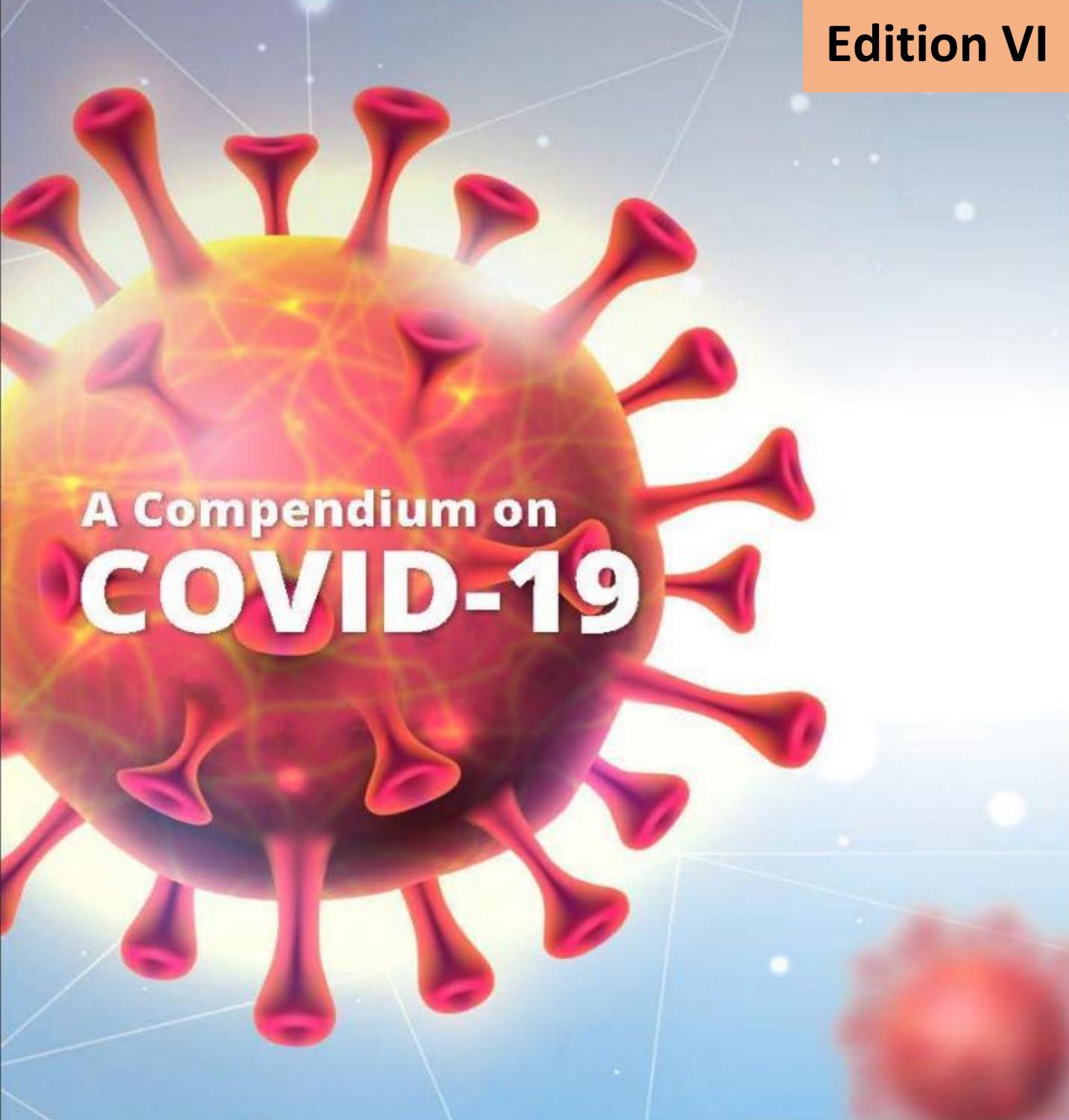


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COVID-19

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Glossary of Terms

Name	Abbreviation
All India Institute of Medical Science	AIIMS
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
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 VI, 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.

Over the past few months, we have experienced an unprecedented shift in our way of life due to COVID-19. The world is facing humanity's biggest crisis since World War II. 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 34.8 million people worldwide, and over 1.03 million¹ people have lost their lives across the globe. In India, the total active cases now stand at 919,023² and more than 103, 569 people have died from the highly contagious virus. It has changed the way people meet and interact, conduct business, and buy essentials. These changes have been necessitated by the very nature of the global pandemic: fast-spreading and disruptive. Disruptive changes, some of them permanent, are imminent, and with no vaccine and limited medical capacity to treat the disease has added to the woes. Even as medical experts and researchers have joined hands across the globe to develop a cure or vaccine to contain this highly infectious virus, it is unlikely for a vaccine to be ready before early next year.

With the COVID-19 crisis spread across the world in a matter of weeks and its numbers increasing rapidly every week, governments have been forced to respond to it by shutting down borders, ordering lockdowns, and ensuring that their people can get the required care. This has led to multiple disruptions in local and global supply chains - for essential and non-essential items, loss of business revenues, and a lack of opportunity. It is by now quite evident that the COVID-19 pandemic is changing the world order. By the time, the world has decisively won against the global pandemic, we would be seeing a world quite different from the one at the end of 2019. The crisis that has emerged due to COVID-19 is unprecedented, but in this battle, we not only need to protect ourselves but also have to keep moving forward. It is critical that the new normal and new 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.
- 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 change**. Schools and universities have moved online, some blending face-to-face with online lectures. Universities around the world are feeling the

¹ <https://www.who.int/docs/default-source/coronavirus/situation-reports/20201005-weekly-epi-update-8.pdf>

² <https://www.mohfw.gov.in/>

- 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.

THE NEW NORMAL



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

Some of us – including people at risk of more severe disease – rely, in part, on other people taking the right actions.

Help protect those who need it most:

	Feel Sick:	stay home unless seeking urgent medical care
	Face:	avoid touching it
	Elbow:	cough into it
	Hands:	clean them often
	Keep distance:	at least 1 metre from others
	Space:	avoid crowded places and limit time in enclosed spaces
	Clean:	frequently touched objects and surfaces regularly

Figure 1: New normal etiquettes to combat COVID-19

Coronavirus

COVID-19

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

Avoid the Three Cs:

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 2: COVID-19- Avoid Three C's



Figure 3: How to Wear and Remove Mask Safely

1.1. Timeline - Start of Pandemic³

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: -

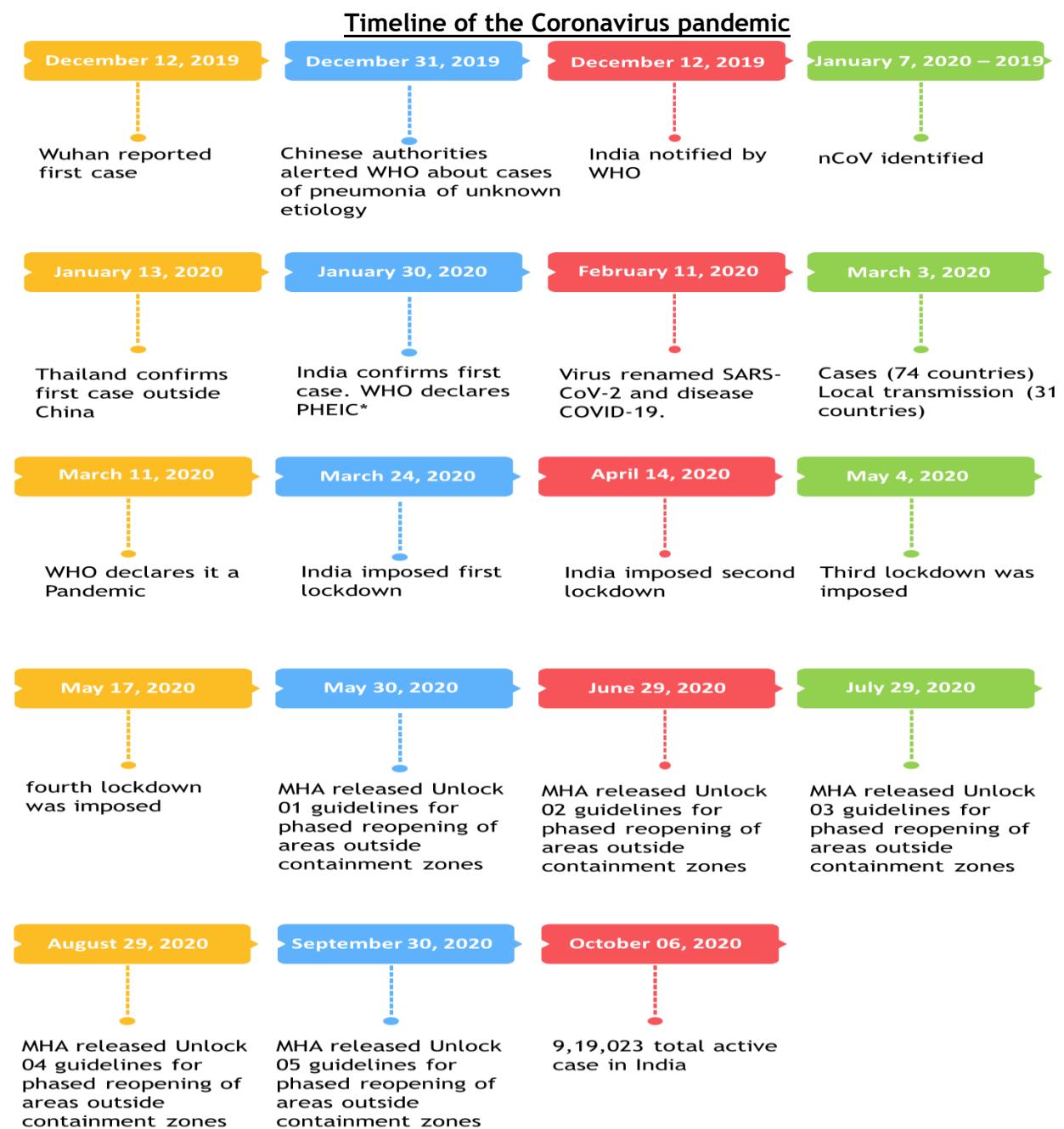


Figure 4: Timeline of the Coronavirus Pandemic

³ <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 has been observed that the virus does not spread easily from a contaminated surface and from animals⁴ 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 government⁵ 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. Also⁶, they have clearly stated that they have not given any instruction to wear mask while travelling in the car.

Recently many new and different types of transmission cases have been reported. In Hong Kong⁷, 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. In⁸ 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% does not.

Another⁹ 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 researchers¹⁰ 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>

University of Georgia's latest study suggest 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.¹¹

⁴ <https://www.washingtonpost.com/health/2020/05/21/virus-does-not-spread-easily-contaminated-surfaces-or-animals-revised-cdc-website-states/>

⁵ <https://m.dailhunt.in/news/india/english/the%20new%20indian%20express-e-paper-newexpress/covid19%20government%20warns%20against%20use%20of%20n95%20masks%20with%20valved%20respirator-newsid-n200215774?s=a&uu=0xdb10a204b80e4ba8&ss=pd>

⁶ <https://www.tribuneindia.com/news/nation/mask-not-must-while-driving-cycling-alone-136077>

⁷ <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>

⁸ <https://thewire.in/health/watch-karan-thapar-interview-covid-19-dileep-mavalankar>

⁹ <https://www.livemint.com/news/world/scientists-figure-out-a-weakness-of-coronavirus-ordinary-water-11596276025946.html>

¹⁰ <https://www.firstpost.com/health/link-between-low-vitamin-d-levels-high-covid-19-infection-risk-established-by-israeli-researchers-8643851.html>

¹¹ <https://www.hindustantimes.com/health/study-supports-airborne-spread-of-covid-19-indoors/story-G9d0AuheDobAZYRPJabVJJ.html>

COVID-19

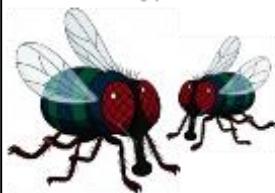
Coronavirus

FACT:

coronavirus **CANNOT** be transmitted through houseflies

To date, there is no evidence or information to suggest that the COVID-19 virus transmitted through houseflies.

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.



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.

COVID-19

Coronavirus

FACT:

The new coronavirus **CANNOT** be transmitted through mosquito bites

To date there has been no information nor evidence to suggest that the new coronavirus could be transmitted by mosquitoes.

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.

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.

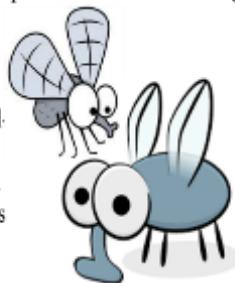
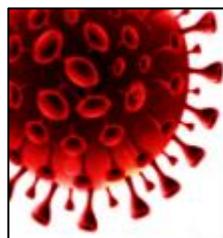


Figure 5: COVID-19 transmission facts about mosquito bites and houseflies

COVID-19 Coronavirus

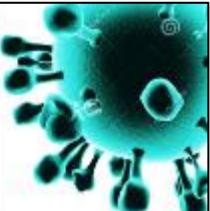


 **PREVENTION**

- Avoid close contact with people who's sick
- Avoid touching your eyes, nose and mouth
- Stay informed with accurate information
- Cover your coughs and sneezes
- Stay home when you are sick



Protect yourself and others



-  Clean your hands frequently
-  When coughing or sneezing, cover your mouth and nose with the inner crease of your elbow or with a disposable tissue
-  Do not touch your mouth, nose and eyes with unclean hands
-  Disinfect objects and surfaces that are used by many people
-  Keep a distance of at least 1 meter from other people
-  Use a face covering according to local recommendations

Figure 6: COVID-19 Prevention

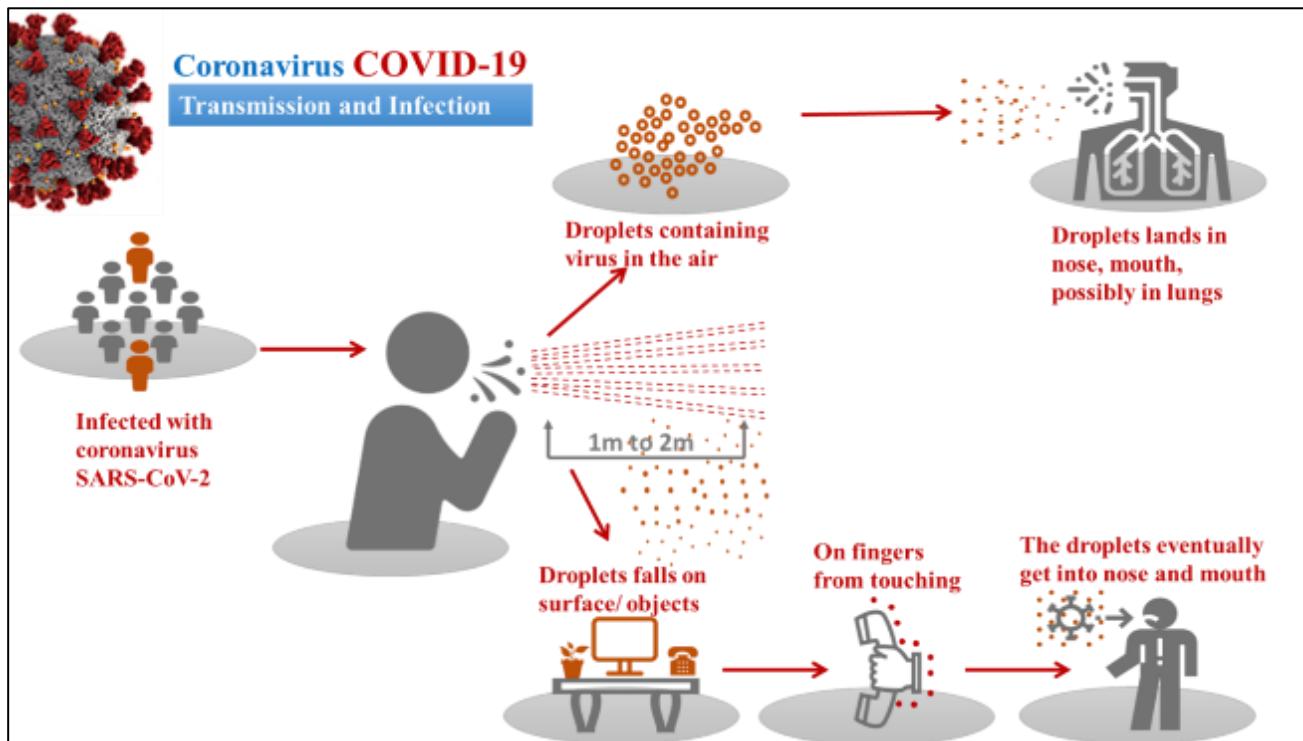


Figure 7: COVID-19 - Transmission & Infection

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 the small droplets that emerge from the noses 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 mouth. Coronavirus risk levels are tabulated below. These have been included based on inputs available and are not definitive or sacrosanct and are only indicative in nature. 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.

CORONAVIRUS RISK LEVELS

Activities that pose greatest risk to Covid-19 ranked – ON A SCALE OF 1- 10



Figure 8: Emerging scientific evidence on Corona Transmission

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

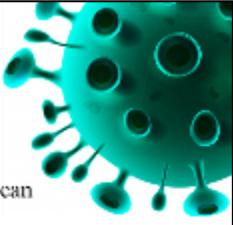
Coronavirus COVID-19

KNOW THE FACTS:

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...



Doorknobs



Laptops and mouse



Lift buttons



Digital services



Pens

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

Figure 9: COVID-19 Facts

1.2.2. How long human coronavirus stay on surfaces?¹²

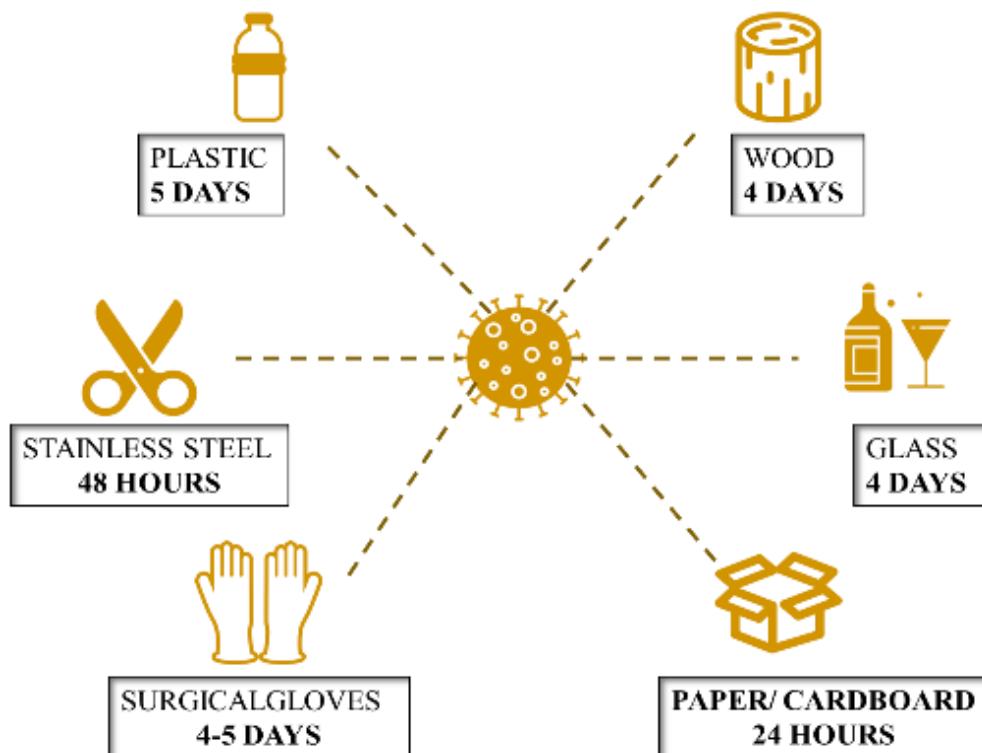


Figure 10: How long Coronavirus stay on Surfaces

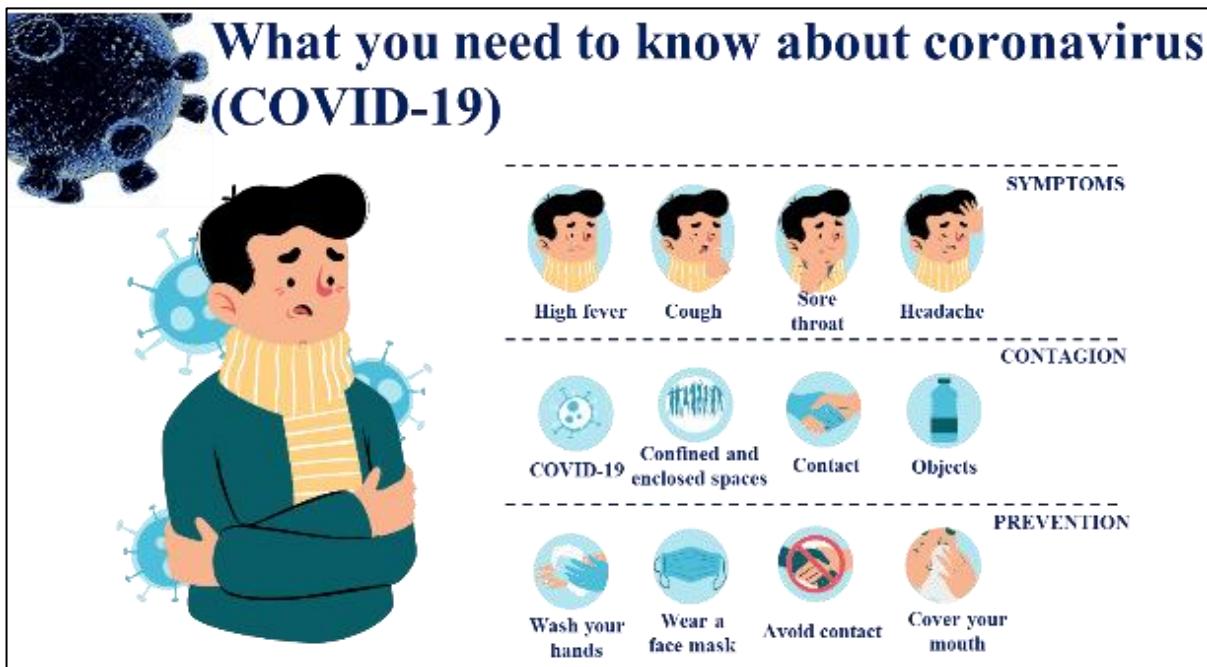


Figure 11: What Do You Need to Know About Coronavirus

¹² 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 research¹³, 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

Amid this COVID¹⁴ 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.

According¹⁵ 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 D₃ is poisonous to human beings

COVID-19 symptoms and some vital health tips are depicted below: -

¹³ <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>

¹⁴ https://m.timesofindia.com/india/not-a-covid-shield-but-flu-shot-can-help-docs/amp_articleshow/77474643.cms

¹⁵ <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 World¹⁶

The South East region, despite being the most affected region, has seen 7% decrease in new cases and a 3% decrease in new death cases whereas the region of Americas has remained the most affected and is accountable for 50% of all reported cases and 55% of deaths. In this region - United States of America, Colombia, Argentina, and Brazil have reported the highest number of cases in the last week. In Africa, the spread of virus has shown a decreasing trend continuously for seven weeks. In Eastern Mediterranean region - Morocco, Iran and Iraq have shown the highest number of cases. In the European region there has been a 5% increase in new cases and 9% increase in new deaths.

For detailed information regarding the cases worldwide (updated to 5 Oct 2020), please refer Annexure 'I'.

2.2 Fatality rates

2.2.1 Comparison of fatality rates - World¹⁷

India has a fatality rate of 1.6% which is among the lowest in the world, whereas Yemen has 28.8 % which is highest in the world. The comparison of the top ten countries with highest fatality rate is tabulated below: -

(As of 01 October 2020)

S. No	Country	Total Deaths	Fatality rates (%)	Deaths/100K Population
1	Yemen	587	28.8	2.06
2	Italy	35918	11.3	59.44
3	Mexico	78078	10.4	61.87
4	UK	42292	9.1	63.61
5	Belgium	10023	8.3	87.75
6	Ecuador	11433	8.2	66.92
7	Chad	85	7.1	0.55
8	Sweden	5893	6.3	57.87
9	Sudan	836	6.1	2.00
10	Liberia	82	6.1	1.70

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

¹⁶ <https://www.who.int/docs/default-source/coronavirus/situation-reports/20201005-weekly-epi-update-8.pdf>

¹⁷ <https://coronavirus.jhu.edu/data/mortality>

2.2.2 Comparison of fatality rates - India¹⁸

According to a report of the Union Health Ministry, out¹⁹ of the total active coronavirus cases reported in India, 0.28% patients are on ventilators, 1.61% patients need ICU support and, 2.32 % are on oxygen support. Low fatality rate has encouraged government to avoid lockdown. Six states have death rate more than national fatality rate as tabulated below: -

S. No	States/UT	Fatality rates (%)
1	Gujarat	3.76
2	Maharashtra	3.45
3	Delhi	2.84
4	Madhya Pradesh	2.56
5	Punjab	2.45
6	West Bengal	2.16
7	Jammu & Kashmir	1.88
8	Karnataka	1.8
9	Uttar Pradesh	1.72
10	Tamil Nadu	1.65
11	Rajasthan	1.52
12	Haryana	1.16
13	Jharkhand	0.91

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

2.3 India (Graph and Map)²⁰

According to the Ministry of Health and Family Welfare (MoHFW), as of 01 September 2020, a total of 919,023 active COVID-19 cases have been reported in 35 States/ Union territories making India the second worst affected country in the world. Despite the rise in the cases, the mortality rate²¹ 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 75%.

India COVID-19 State wise status (As of 6 October 2020)²²

S. No	Name of State / UT	Active Cases	Cured/Discharged/Migrated	Deaths
1	Andaman and Nicobar Islands	186	3659	54
2	Andhra Pradesh	51060	666433	6019
3	Arunachal Pradesh	2989	7775	19

¹⁸ <https://economictimes.indiatimes.com/news/politics-and-nation/indias-coronavirus-mortality-rate-may-retreat-below-key-threshold-here's-what-it-means/articleshow/77455115.cms>

¹⁹ <https://www.thehindu.com/news/national/indias-case-fatality-rate-of-218-among-lowest-says-minister/article32241641.ece>

²⁰ <https://www.mohfw.gov.in/>

²¹ <https://zeenews.india.com/india/india-s-covid-19-mortality-rate-stands-at-1-58-lowest-in-the-world-recovery-rate-over-75-health-ministry-2305286.html>

²² <https://www.mohfw.gov.in/>

4	Assam	33467	153491	760
5	Bihar	11523	176995	924
6	Chandigarh	1604	10797	177
7	Chhattisgarh	27857	97067	1081
8	Dadra and Nagar Haveli and Daman and Diu	99	2991	2
9	Delhi	23080	263938	5542
10	Goa	4803	30456	460
11	Gujarat	16718	123638	3509
12	Haryana	11822	121596	1491
13	Himachal Pradesh	3156	12653	224
14	Jammu and Kashmir	14696	63790	1252
15	Jharkhand	10436	76843	747
16	Karnataka	115496	522846	9370
17	Kerala	84958	149111	859
18	Ladakh	1166	3414	61
19	Madhya Pradesh	18757	115878	2463
20	Maharashtra	252721	1162585	38347
21	Manipur	2696	9334	75
22	Meghalaya	2217	4491	59
23	Mizoram	291	1837	0
24	Nagaland	1155	5422	17
25	Odisha	28006	206400	924
26	Puducherry	4513	24221	543
27	Punjab	12895	102648	3641
28	Rajasthan	21215	123421	1559
29	Sikkim	598	2547	46
30	Tamil Nadu	45881	569664	9846
31	Telangana	26644	174769	1181
32	Tripura	4876	22131	301
33	Uttarakhand	8701	42621	669
34	Uttar Pradesh	45024	366321	6092
35	West Bengal	27717	240707	5255
	Total#	919023	5662490	103569

Figure 15: India COVID-19 State wise status (As of 1 October 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 diagrammatically represented below.

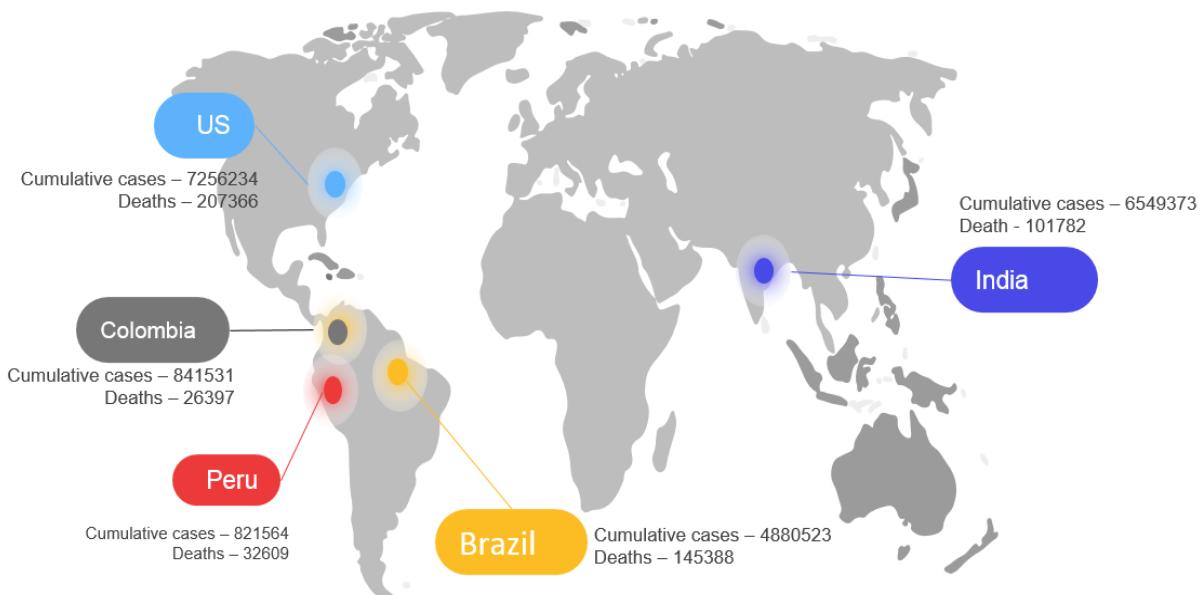


Figure 16: Confirmed and Death cases of 5 topmost affected countries

2.3.2 Countries with Highest Number of Cases

(Data as of 5 October 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	7 256 234	296 082	207 366	626
2	India	6 549 373	556 841	101 782	74
3	Brazil	4 880 523	190 910	145 388	684
4	Colombia	841 531	43 214	26 397	519
5	Peru	821 564	26 980	32 609	989

Figure 17: Countries with highest number of cases

2.3.3 Countries with Lowest Number of Cases

(Data as of 5 October 2020)

S. No	Reporting Country/Territory/Area	Cumulative Cases	New deaths in last 7 days	Cumulative deaths	Deaths (per million population)
1	Anguilla	3	0	0	<1
2	Holy See	12	0	0	<1
3	Falkland Islands (Malvinas)	13	0	0	<1
4	Montserrat	13	0	1	200
5	Saint Pierre and Miquelon	16	0	0	<1

Figure 18: Countries with lowest number of cases

2.4 State and Union Territory

2.4.1 State / Union territory with Highest Number of Cases (Data as of 06 October 2020)

S. No	State /UT	Total Active cases	Cured/Discharged/Migrated	Deaths
1	Maharashtra	252721	1162585	38347
2	Karnataka	115496	522846	9370
3	Kerala	84958	149111	859
4	Andhra Pradesh	51060	666433	6019
5	Uttar Pradesh	45024	366321	6092

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

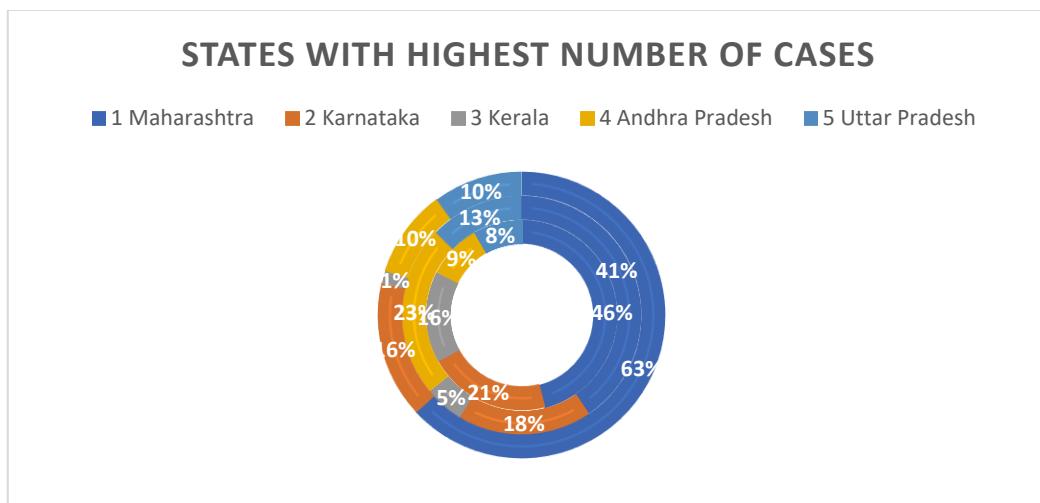


Figure 19: States with highest number of cases

2.4.2 State / Union territory with Lowest Number of Cases (Data as of 06 October 2020)

S. No	State /UT	Total confirmed cases	Cured/Discharged/Migrated	Deaths
1	Dadra and Nagar Haveli and Daman and Diu	99	2991	2
2	Andaman & Nicobar Islands	186	3659	54
3	Mizoram	291	1837	0
4	Sikkim	598	2547	46
5	Ladakh	1166	3414	61

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

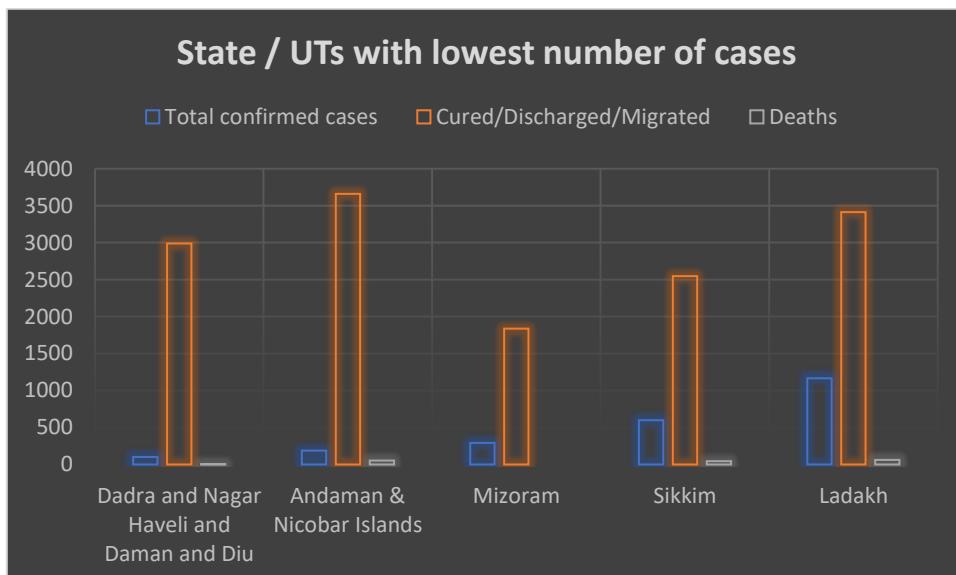


Figure 20: States with lowest number of cases

2.4.3 State Wise Fatality Rates²³

The coronavirus active cases in India has risen to 9.19 lakh. India is the most affected country in the world. Diagram below shows the active cases and death in different states and UT.

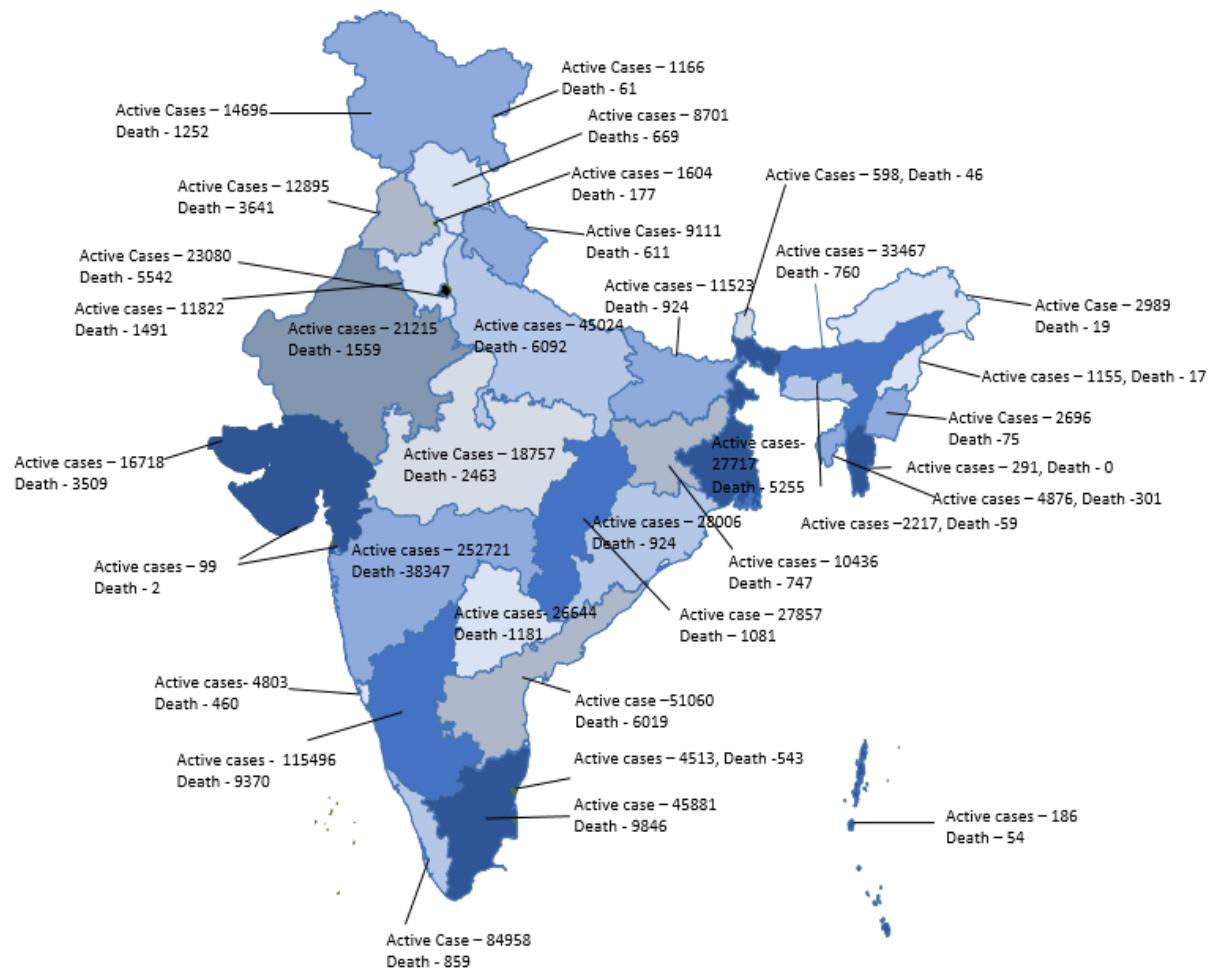


Figure 21: Active and death cases in India

²³ <https://www.mohfw.gov.in/>

3 Cure & Treatment

3.1 COVID-19 Vaccines

Coronavirus has now killed more than 10 lakh people across the world while the number of COVID-19 cases have surged to 34.8 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. There are more than 216 known entities working on the cure (some details are mentioned in earlier Editions - I, II, III, IV and V) and at least 35 of them have entered the clinical trial phase, including three vaccines that are being developed in India. There are no proven knockout treatments, and health official's world over say a vaccine could take at least a year to 18 months. However, 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. About a dozen different vaccines are in various stages of testing worldwide, including in Britain, China, and the US. The list of top leading candidates at various stages of clinical trials are depicted in the below infographics. In India²⁴, according to ICMR, there are three potential COVID-19 vaccine under advanced human trials - 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. Whereas, both Bharat Biotech and Zydus Cadila are conducting phase I/ II human trials right now.

Also, ICMR in collaboration with a Hyderabad-based biopharmaceutical company has developed "highly purified antisera" prepared by injecting inactivated SARS-CoV2 in horses, which can be a potential treatment for Covid-19.²⁵ The trials for the same are likely to commence soon.

²⁴ <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>

²⁵ https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/icmr-biological-e-ltd-develop-potential-treatment-for-covid-19/articleshow/78440108.cms?UTM_Source=Google_Newsstand&UTM_Campaign=RSS_Feed&UTM_Medium=Referral

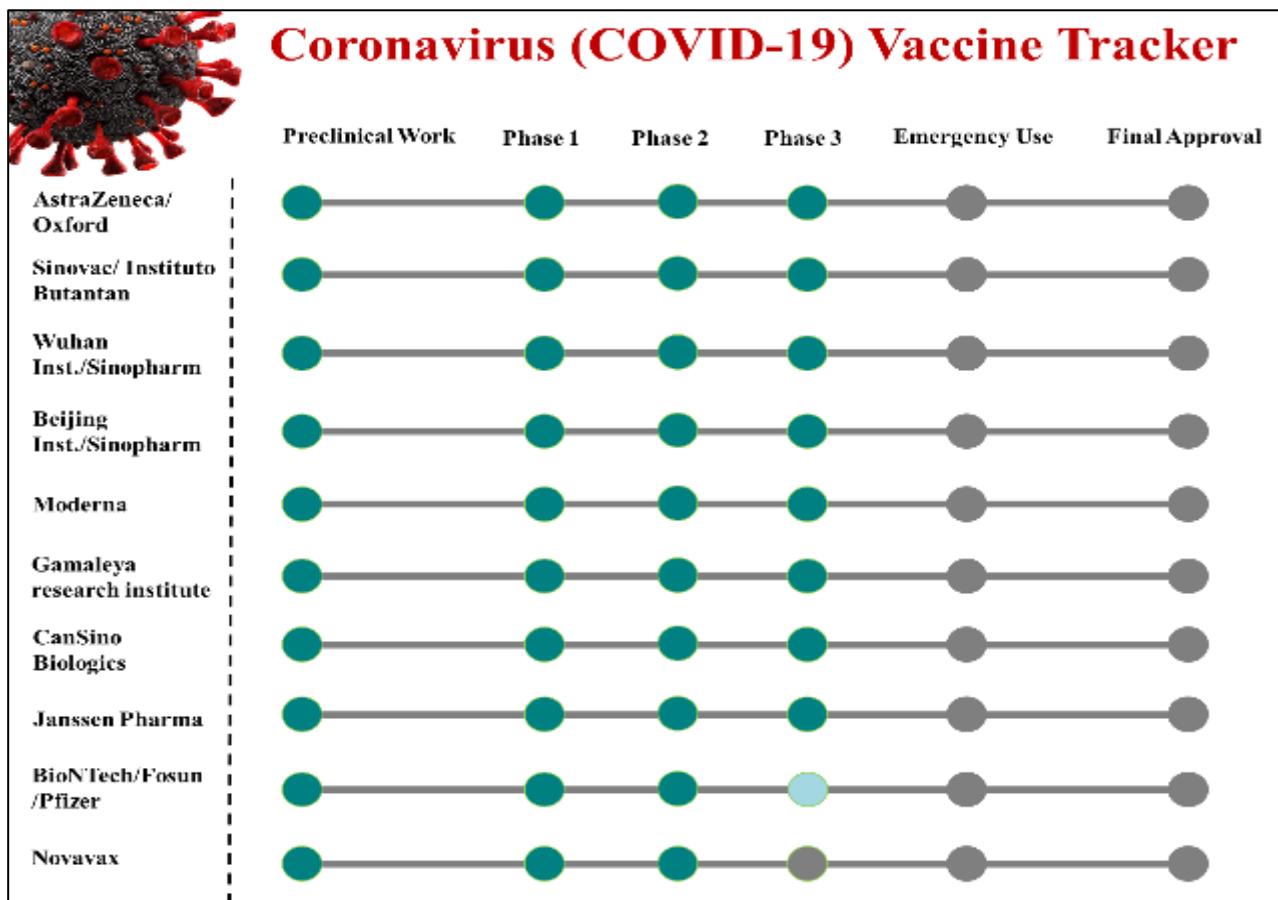


Figure 22: Tracking COVID-19 vaccines²⁶

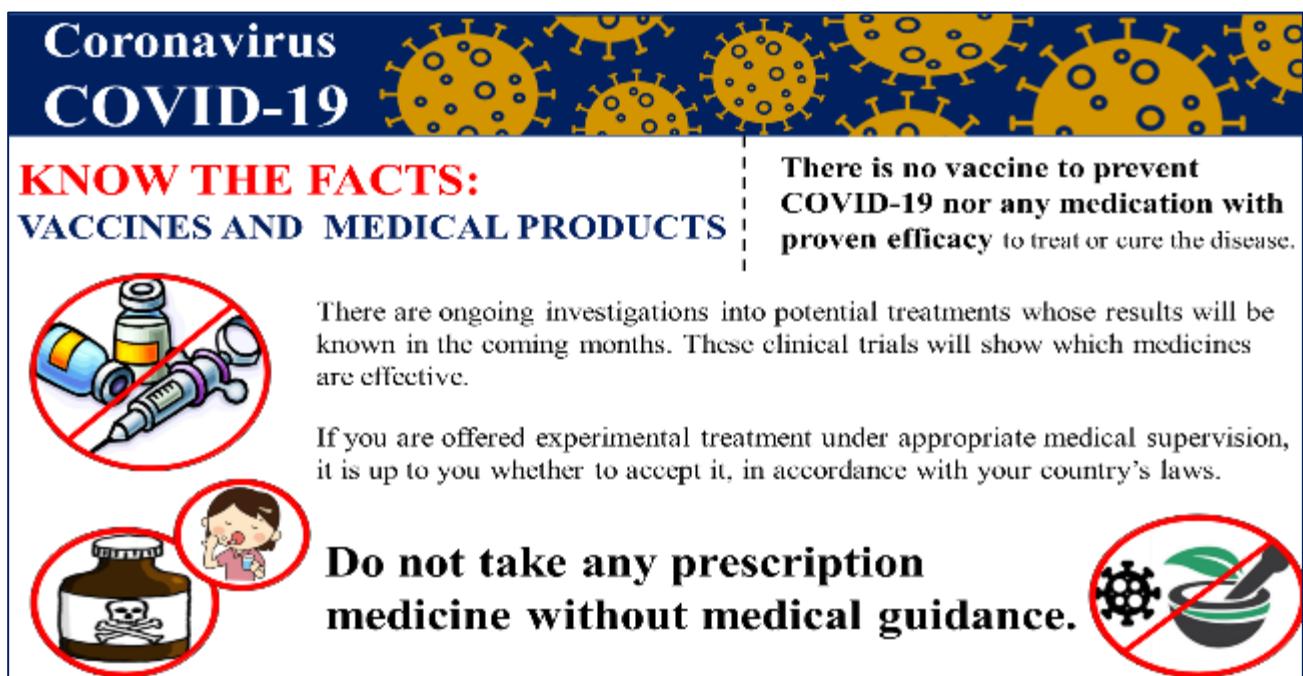


Figure 23: Know the facts about vaccines and medical products

²⁶ <https://www.covid-19vaccinetracker.org/#Top-of-Page>

3.1.1 University of Oxford and AstraZeneca²⁷

AstraZeneca, which is developing AZD1222 vaccine in collaboration with Oxford University, aims to deliver 300 million doses of a safe, effective vaccine for COVID-19 by January 2021. The phase III clinical testing of the Oxford-AstraZeneca COVID-19 vaccine candidate has also commenced in the US. The trial will enrol approximately 30,000 adult volunteers in 80 sites in the United States. AZD1222 is already undergoing late-stage clinical trials in Britain, Brazil and South Africa, with additional trials planned in Japan and Russia. The trials, together with the U.S. Phase III study, aim to enrol up to 50,000 participants globally. AstraZeneca has finally begun phase III testing in India. To be sold as 'Covishield', the prime vaccine candidate has been administered to three volunteers at KEM hospital, Mumbai and 17 sites have been shortlisted for conducting the trials in India. Over 1600 participants have been part of the phase II trials in the past month. Phase III of the trials will assess and monitor how the vaccine works in a large number of people over the age of 18, and how well the vaccine works to prevent people from becoming infected and unwell with COVID-19. If the trial results convince regulators, deliveries would be expected to start by January 2021.

<https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/coronavirus-vaccine-from-covaxin-to-russian-vaccine-roll-out-here-are-all-the-updates-regarding-covid-19-vaccine-development/photostory/78362614.cms?picid=78362624>

3.1.2 Sinovac Biotech²⁸

Chinese firm Sinovac Biotech has entered into an agreement with a drug maker in Brazil to conduct the final phase of the three-part human testing of its CoronaVac vaccine, with the vaccine being approved in July, for emergency use in China to vaccinate high-risk groups such as medical staff. Sinovac has received approval for starting phase-3 clinical trial of its COVID-19 vaccine candidate, CoronaVac, in Brazil. Sinovac will dose nearly 9,000 healthcare professionals working in COVID-19 specialised facilities in 12 clinical sites located in several states in Brazil. China's Sinovac Biotech Ltd launched a late-stage human trial on 11 August 2020, that involves as many as 1,620 patients in Indonesia for COVID-19 vaccine candidate that it is developing with Indonesia state-owned peer Bio Farma. Results of a Phase II clinical trial, released in June, shows that the vaccine induced antibodies to neutralize the virus after 14 days in 90% of people who received it. The vaccine requires two injections, given two weeks apart, according to the company. No serious side effects have been reported in either phase I or II trials, which included 743 healthy volunteers. Simultaneously, Sinovac is also preparing a coronavirus vaccine plant, which it hopes will be ready this year and capable of making up to 100 million shots a year. The company plans on worldwide distribution of the vaccine in early 2021 – including the United States.

<https://health.economictimes.indiatimes.com/news/pharma/sinovacs-covid-19-vaccine-advances-to-key-phase-3-trial/76835555>

²⁷ <https://economictimes.indiatimes.com/news/international/world-news/astrazenecas-covid-19-vaccine-reaches-phase-3-clinical-trials-in-us-says-trump/articleshow/77866274.cms>

²⁸ <https://www.pharmaceutical-technology.com/news/sinovac-vaccine-emergency-use/>
https://www.hindustantimes.com/world-news/90-of-people-given-vaccine-by-sinovac-show-promising-results/story_00KjZxwe3HOu7bVfO1jRM.html
<https://indianexpress.com/article/coronavirus/coronavirus-covid-19-vaccines-latest-news-covaxin-oxford-sinovac-moderna-gsk-sanofi-6494159/>
<https://indianexpress.com/article/coronavirus/sinovac-launches-phase-3-trial-for-covid-19-vaccine-in-indonesia-reports-phase-2-details-6550018/>

3.1.3 Sinopharm²⁹

A potential coronavirus vaccine being developed by a unit of China National Pharmaceutical Group (Sinopharm) appeared to be safe and triggered antibody-based immune responses in early and mid-stage trials. It has entered a late-stage human test in the United Arab Emirates to gather proof of efficacy for final regulatory approvals. On Sept. 14, the U.A.E. gave emergency approval for Sinopharm's vaccine to use on health care workers, before Sinopharm shared data indicating it was safe and effective. The Phase 3 trial is expected to recruit 15,000 people. It is expected to cost a few hundred yuan for a shot, and for two shots it should be less than 1,000 yuan. Its plants in Wuhan and Beijing combined could make over two million doses of the drug annually. Sinopharm has said its experimental vaccine could be ready for public use by the end of this year.

<https://www.livemint.com/news/world/uae-announces-emergency-approval-for-use-of-covid-vaccine-for-frontline-workers-11600104454984.html>

3.1.4 Moderna³⁰

Moderna's experimental coronavirus vaccine is currently in phase 3 clinical trial. The Phase 3 study of mRNA-1273 is being conducted in collaboration with the NIH and BARDA, involving about 30,000 participants in the United States. Its initial results in phase II of its clinical trial showed that monkeys on which the vaccine was administered were safe. The cost of Moderna's vaccine is likely to be INR 3,700 to INR 4,500 for the entire course and INR 1,800 to INR 2,300 per dose. However, these prices will be applicable in the US and the high-income countries. Moderna is on track to deliver roughly 500 million doses of the vaccine per year, and potentially up to 1 billion doses annually, starting from 2021.

3.1.5 Gamaleya Research Institute

The Russian vaccine is called "Sputnik V" after the Soviet-era satellite that was first launched into space in 1957. It was developed by the Gamaleya research institute for epidemiology and microbiology in Moscow in coordination with the Russian defence ministry. On 11th August Russia approved a vaccine candidate developed by Moscow's Gamaleya Institute before Phase 3 trials had even begun. The Sputnik V, COVID-19 vaccine, is currently undergoing post-registration trials involving about 42,000 volunteers. Russia has started testing the vaccine on the elderly and other high-risk groups as part of the late-stage trials. The first results of these trials are expected to be released in October-November 2020.

3.1.6 Pfizer³¹

Pharmaceutical giant Pfizer, which is co-producing the vaccine called BNT162 with the help of German company BioNTech, has started the process of dosing patients. This trial will evaluate the safety, ability to give immunity, and the optimal dose of the four candidates in a single and

²⁹<https://www.hindustantimes.com/world-news/china-sinopharm-chief-rules-out-high-price-for-coronavirus-vaccine/story-5Prn8E9WAXw8pXvP41T45M.html>

³⁰ <https://www.forbes.com/sites/greatspeculations/2020/06/15/moderna-races-ahead-finalizes-plans-for-phase-3-trials/#565a77f55d76>
<https://www.livemint.com/science/health/moderna-s-covid-vaccine-enters-final-trial-today-latest-updates-here-11595821838242.html>

³¹ https://www.business-standard.com/article/current-affairs/coronavirus-vaccine-update-latest-news-on-corona-drug-vaccine-current-status-patanjali-ayurveda-china-astrazeneca-more-120061500391_1.html

<https://indianexpress.com/article/coronavirus/coronavirus-covid-19-vaccine-latest-updates-oxford-astrazeneca-inovio-pfizer-bharat-biotech-6486286/>

<https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-choose-lead-mrna-vaccine-candidate-0>
<https://www.clinicaltrialsarena.com/news/pfizer-covid-vaccine-early-data/>

continuous study. In the ongoing phase 1/2 trial, the scientists assessed the safety, side effects, and safe dose of the vaccine candidate in 45 healthy adults (23 men and 22 non-pregnant women) aged 18-55 years. The data is being shared with scientists in real time. The tests are currently on in Germany and parts of the US. The next stage Phase 2/3 study involving up to 30,000 participants aged 18 - 85 years started in the U.S. and is expected to include approximately 120 sites globally. On 12 Sep, Pfizer and BioNTech announced that they would seek to expand their U.S. trial to 43,000 participants. BNT162 remains under clinical study and is not currently approved for distribution anywhere in the world. If the Phase 2/3 trial is successful, Pfizer and BioNTech expect to be ready to seek Emergency Use Authorization or some form of regulatory approval as early as October 2020. If authorization or approval is obtained, the companies currently aim to supply globally up to 100 million doses by the end of 2020 and approximately 1.3 billion doses by the end of 2021.

<https://www.nytimes.com/2020/09/30/health/pfizer-covid-vaccine.html>

3.1.7 CanSino Biologics³²

CanSino Biologics in Tianjin, China, is working with the Beijing Institute of Biotechnology on a coronavirus vaccine and has been listed by WHO as one of the top contenders, using a type of genetically altered adenovirus known as Ad-5. A Chinese experimental coronavirus vaccine has been approved for military use in China. The Ad5-nCoV vaccine, jointly developed by CanSino Biologics and the Beijing Institute of Biotechnology, Academy of Military Medical Sciences, is one of the eight vaccine candidates being created by Chinese firms and approved to be moved to human trials against the SARS-CoV-2 virus, which causes COVID-19 disease. CanSino Biologics Inc has won a patent approval from Beijing for its COVID-19 vaccine candidate Ad5-nCoV. The Ad5-nCoV vaccine candidate already moved into clinical trials in the month of April and it has cleared the Phase 1 of the trial, in which 108 people got three doses (low, middle, high) of the vaccine and moved to phase 2 of the study in mid-April, in which over 500 candidates were enrolled. Clinical trials of Ad5-nCoV vaccine in Phase 1 and Phase 2 have shown that the vaccine candidate has the potential to prevent infections caused by the novel coronavirus. CanSino began Phase 3 trials in a number of countries, including Saudi Arabia, Pakistan and Russia. According to Saudi Ministry of Health, the Phase 3 trial enrolls approximately 5,000 volunteers. The study will compare Ad5-nCOV to a placebo.

3.1.8 Johnson & Johnson

Johnson & Johnson has launched the Phase 3 human trials of its experimental Coronavirus vaccine candidate Ad26.CO V2.S. The potential COVID-19 vaccine candidate is being developed by Johnson & Johnson's Janssen Pharmaceutical Companies. The potential COVID-19 vaccine candidate is being developed by Johnson & Johnson's Janssen Pharmaceutical Companies. Phase 3 clinical trials, 60,000 volunteers would be enrolled across three continents. Countries, where phase 3 human trials of Johnson & Johnson's Coronavirus vaccine will be taking place, are - Argentina, Brazil, Chile, Colombia, Mexico, Peru, South Africa, and the US. It has stated that the phase 3 clinical study will assess the safety and efficacy of a single vaccine dose versus placebo in preventing Coronavirus. The company is aiming for production of at least a billion doses in 2021.

³² <https://www.ndtv.com/world-news/covid-19-vaccine-cansinos-covid-19-vaccine-candidate-approved-for-military-use-in-china-2253819>
<https://www.webmd.com/lung/news/20200610/covid-19-latest-updates>

<https://www.moneycontrol.com/news/trends/health-trends/coronavirus-vaccine-update-johnson-johnsons-covid-19-vaccine-produces-strong-immune-response-in-early-trial-5887811.html>

3.1.9 Novavax³³

The US-based vaccine development company, had conducted phase-1 trials in Australia which were completed in the month of July. Novavax has begun the phase-2 human trials of its vaccine for novel Coronavirus in South Africa in August. Novavax says the trial would be conducted on about 2600 volunteers. Phase-2 trials are about studying the effectiveness of the vaccine in human beings. Novavax, announced that it has initiated Phase 3 study to evaluate the efficacy, safety and immunogenicity of NVX-CoV2373, Novavax COVID-19 vaccine candidate. The trial is being conducted in the United Kingdom (UK), in partnership with the UK Government's Vaccines Taskforce, and is expected to enroll up to 10,000 individuals between 18-84 years of age. In India, Novavax has entered into an agreement with Pune-based Serum Institute of India for production of 100 million doses of the vaccine. The potential vaccine, which is being called NVX-CoV2373, is using adjuvant technology and will attempt to neutralize the so-called spike protein, found on the surface of the coronavirus, which is used to enter the host cell. the U.S. based company will give the late-stage biotech company up to \$60 million to fund the manufacturing of its experimental COVID-19 vaccine, which includes the delivery of 10 million doses of its COVID-19 vaccine - NVX-CoV2373 - to the DoD this year.

<https://www.moneycontrol.com/news/trends/health-trends/coronavirus-vaccine-update-novavax-begins-phase-3-trials-of-its-covid-19-vaccine-in-the-uk-to-enrol-10000-participants-5882521.html>

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: -

³³ <https://www.thehindu.com/news/international/novavax-gets-us-defense-funding-for-its-covid-19-vaccine/article31753852.ece>
<https://indianexpress.com/article/explained/covid-vaccine-tracker-update-august-18-6559135/>

Coronavirus COVID-19

KNOW THE FACTS: WARNING FALSIFIED MEDICAL PRODUCTS

There are a growing number of **falsified medical products** that claim to prevent, detect, treat or cure COVID-19..

Falsified medical products **can carry significant health risks.**

Many internet sites sell falsified or substandard medicines. Taking any unapproved medicine for COVID-19 is **dangerous.**

If you detect or suspect falsified or unregulated medical products, notify the health authorities in your country.

Do not take any prescription medicine without medical guidance.

Figure 24: Warning about falsified medical products

3.2.1 Remdesivir³⁴

Remdesivir has shown some promise in treating SARS and MERS, which are also caused by coronaviruses. US regulators are now allowing use of experimental antiviral drug remdesivir for all patients hospitalized with COVID-19 under emergency use authorization. California-based Gilead applied to the FDA on 10 Aug 2020 for formal approval of remdesivir, to be sold under the brand name Veklury. Zydus Cadila on 13th 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 it up to (\$37.44) per 100mg vial. Remdac is the most economical Remdesivir brand in India. Remdesivir has proved, in a study, that it has reduced the recovery time of patients from 15 days to 11 days. The drug has also 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/m² 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.livemint.com/science/health/at-rs-2-800-zydus-cadila-launches-india-s-cheapest-remdesivir->

³⁴ <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%24>
<https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>

[version-for-treatment-of-covid-19-](https://www.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf)

[11597292543769.htmlhttps://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 Hydroxychloroquine³⁵

Representatives from AIIMS, ICMR, NCDC, NDMA, WHO and experts from the central government hospitals have reviewed the use of Hydroxychloroquine (HCQ) and has issued revised advisory on the use of HCQ (in supersession of previous advisory dated 23 March 2020).

The National Task Force constituted by ICMR and Joint Monitoring Group have recommended the prophylactic use of HCQ for the following categories.

- I. All asymptomatic healthcare workers involved in containment and treatment of COVID 19 and asymptomatic healthcare workers working in non-COVID hospitals/non-COVID areas of COVID hospitals/blocks
- II. Asymptomatic household contacts of laboratory confirmed cases.
- III. Asymptomatic frontline workers, such as surveillance workers deployed in containment zones and paramilitary/police personnel involved in COVID-19 related activities.

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.

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

³⁵ <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.mohfw.gov.in/pdf/UpdatedClinicalManagementProtocolforCOVID19dated03072020.pdf>

3.2.3 Dexamethasone³⁶

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 Favipiravir³⁷

Hyderabad: Raghava Life Sciences (RLS) has received the drug control body's approval to manufacture and market the Favipiravir bulk drug. The 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.

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

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==

3.2.5 Itolizumab³⁸

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

³⁶

³⁷ <https://www.expresspharma.in/latest-updates/optimus-launches-covid-19-drug-favipiravir-commences-commercial-export/>

³⁸ <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

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/dcgis-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 Therapy³⁹

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

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 Tocilizumab⁴⁰

This is an immunosuppressant commonly used to treat for rheumatoid arthritis. In Mumbai, more than 100 severely ill COVID patients have been treated with this drug as a preventive against ventilator requirement; 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 in COVID 19 remains largely unknown. Special considerations before its use include:

- I. Presence of raised inflammatory markers (e.g., CRP, Ferritin, IL-6)

³⁹ <https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>, <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

⁴⁰ <https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf>, <https://indianexpress.com/article/explained/the-drugs-india-is-fighting-covid-with-6449377/>

- 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/mm³ and Platelet count < 1,00,000/mm³

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 conditions⁴¹.

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: -

The Delhi government alone has added 22 private hospitals to their list in the recent past, while additional beds are being added at alternative sites such as hotels (adding another 4,000 beds) and stadiums⁴².

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

3.3.1 Designated COVID Hospitals⁴³

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

⁴¹ <https://www.livemint.com/news/india/indian-railways-arranges-960-covid-care-coaches-in-five-states-11592402206693.html>

⁴² <https://www.theweek.in/news/india/2020/06/19/health-systems-in-delhi-about-to-get-overwhelmed-by-covid-19-doctors.html>

⁴³ <https://health.economictimes.indiatimes.com/news/hospitals/7740-dedicated-covid-19-health-facilities-in-483-districts-identified-health-ministry/75670863>

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	https://covidindia.org/andaman-and-nicobar-islands/
2	Andhra Pradesh	https://covidindia.org/andhra-pradesh/
3	Arunachal Pradesh	https://covidindia.org/arunachal-pradesh/
4	Assam	https://covidindia.org/assam/
5	Bihar	https://covidindia.org/bihar/
6	Chhattisgarh	https://covidindia.org/chhattisgarh/
7	Chandigarh	https://covidindia.org/chandigarh/
8	Delhi	https://covidindia.org/delhi/
9	Dadar & Nagar Haveli and Daman & Diu	https://covidindia.org/dadar-nagar-haveli-and-damand-diu/
10	Goa	https://covidindia.org/goa/
11	Gujarat	https://covidindia.org/gujarat/
12	Haryana	https://covidindia.org/haryana/
13	Himachal Pradesh	https://covidindia.org/himachal-pradesh/
14	Jammu & Kashmir	https://covidindia.org/jammu-and-kashmir/
15	Jharkhand	https://covidindia.org/jharkhand/
16	Karnataka	https://covidindia.org/karnataka/
17	Kerala	https://covidindia.org/kerala/
18	Ladakh	https://covidindia.org/ladakh/
19	Madhya Pradesh	https://covidindia.org/madhya-pradesh/
20	Maharashtra	https://covidindia.org/maharashtra/

21	Manipur	https://covidindia.org/manipur/
22	Meghalaya	https://covidindia.org/meghalaya/
23	Mizoram	https://covidindia.org/mizoram/
24	Nagaland	https://covidindia.org/nagaland/
25	Odisha	https://covidindia.org/odisha/
26	Puducherry	https://covidindia.org/puducherry/
27	Punjab	https://covidindia.org/punjab/
28	Rajasthan	https://covidindia.org/rajasthan/
29	Sikkim	https://covidindia.org/sikkim/
30	Tamil Nadu	https://covidindia.org/tamil-nadu/
31	Telangana	https://covidindia.org/telangana/
32	Tripura	https://covidindia.org/tripura/
33	Uttarakhand	https://covidindia.org/uttarakhand/
34	Uttar Pradesh	https://covidindia.org/uttar-pradesh/
35	West Bengal	https://covidindia.org/west-bengal/

Figure 25: Designated COVID hospitals

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

<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 are being designated as quarantine facilities. The updated list is available on State websites.

3.4 Testing Strategy⁴⁴

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 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).

- 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.

⁴⁴ 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

- 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 recommended 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/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 Facilities⁴⁵

In total, India has performed 75 million tests since January 22 when COVID-19 testing started with one lab at the Indian Council of Medical Research's National Institute of Virology in Pune. Now India has developed COVID-19 testing to cover more than 14 lakh samples a day, while the network of laboratories under the Indian Council of Medical Research (ICMR) has been expanded to 1,853 across the country. As per ICMR, this includes 1,093 government labs and 760 in the private sector. ICMR Director says the goal was to establish a lab in every district of the country, which they have achieved to a large extent. 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

⁴⁵ https://www.icmr.gov.in/pdf/covid/labs/Private_Lab_Advisory_11062020.pdf

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/ly>

https://www.icmr.gov.in/pdf/covid/update/ICMR_testing_update_01Oct2020.pdf

S. No	Total Operational (initiated independent testing)	Laboratories reporting to ICMR
1	Real-Time RT PCR for COVID-19	943 (Govt: 481 + Private: 462)
2	TrueNat Test for COVID-19	781 (Govt: 577 + Private: 204)
3	CBNAAT Test for COVID-19	129 (Govt: 35 + Private: 94)
	Total number of Labs	1596

Figure 26:Total operational laboratories reporting to ICMR

https://www.icmr.gov.in/pdf/covid/labs/COVID_Testing_Labs_30092020.pdf

3.6 Testing Kits⁴⁶

As per ICMR, over 75.6 million samples have been tested for COVID-19 across India till 30 September 2020 of which more than 14 lakh were examined on 30 September , 2020 alone. The number of samples tested every day continues to steadily grow. ICMR recently also approved the use of rapid-antigen test for coronavirus infection that gives results in 30 minutes. It has recommended deployment of rapid antigen detection test for COVID-19 in combination with the RT-PCR test in all containment zones, Central and State government medical colleges and government hospitals, private hospitals approved by the National Accreditation Board for Hospitals and Healthcare (NABH), and all NABL-accredited and ICMR-approved private labs for COVID-19 testing. Presently India is utilizing over 90 percent of its testing capacity for COVID-19.

<https://www.icmr.gov.in/>

⁴⁶ <https://www.icmr.gov.in/>

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 Zone⁴⁷ 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.

4.2 Isolation Duration and Precaution for Adults with COVID-19⁴⁸

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.

⁴⁷ <https://english.jagran.com/india/coronavirus-pandemic-what-is-covid19-containment-zone-how-is-it-created-and-what-restrictions-are-imposed-10010483>

⁴⁸ <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 MoHFW⁴⁹

Offices have resumed with the lockdown 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 etc, which increase the risk of transmission. Extra care thus must be taken to limit the spread of infection.

⁴⁹ <https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>

Basic Preventive Measure

- Employees should be asked to monitor their health and report any illness at the earliest
- 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.
- One should strictly follow respiratory etiquettes.

Preventive measures for offices

- Guidelines issued by DoPT should be followed
<https://www.mohfw.gov.in/pdf/PreventivemeasuresDOPT.pdf>
- If any staff suffering from flu like symptoms, should not attend the office and seek medical advice.
- If any staff if diagnosed with suspect/confirmed case, he/she should immediately inform the office authorities.
- If any staff stays in containment zone, he/she should be permitted to work from home.

Measures to be taken on occurrence of case(s)

- When one or few person suffer from COVID-19, then follow the preventive measure mentioned in the link given below
<https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>
- 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.

Figure 27: Basic preventive measures at workplaces and offices etc.

4.3.2 WHO Advisory⁵⁰

WHO has also advised on how to prevent the transmission of COVID-19 at workplace in the following situations as appended in the succeeding paragraphs.

⁵⁰ https://www.who.int/docs/default-source/coronavirus/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6

4.3.2.1 Ways to prevent spread of COVID-19 in workplace

Employees should take extra care to prevent the spread of the infection in their workplace. This will help them reducing working days they might lose due to illness caused by COVID-19.

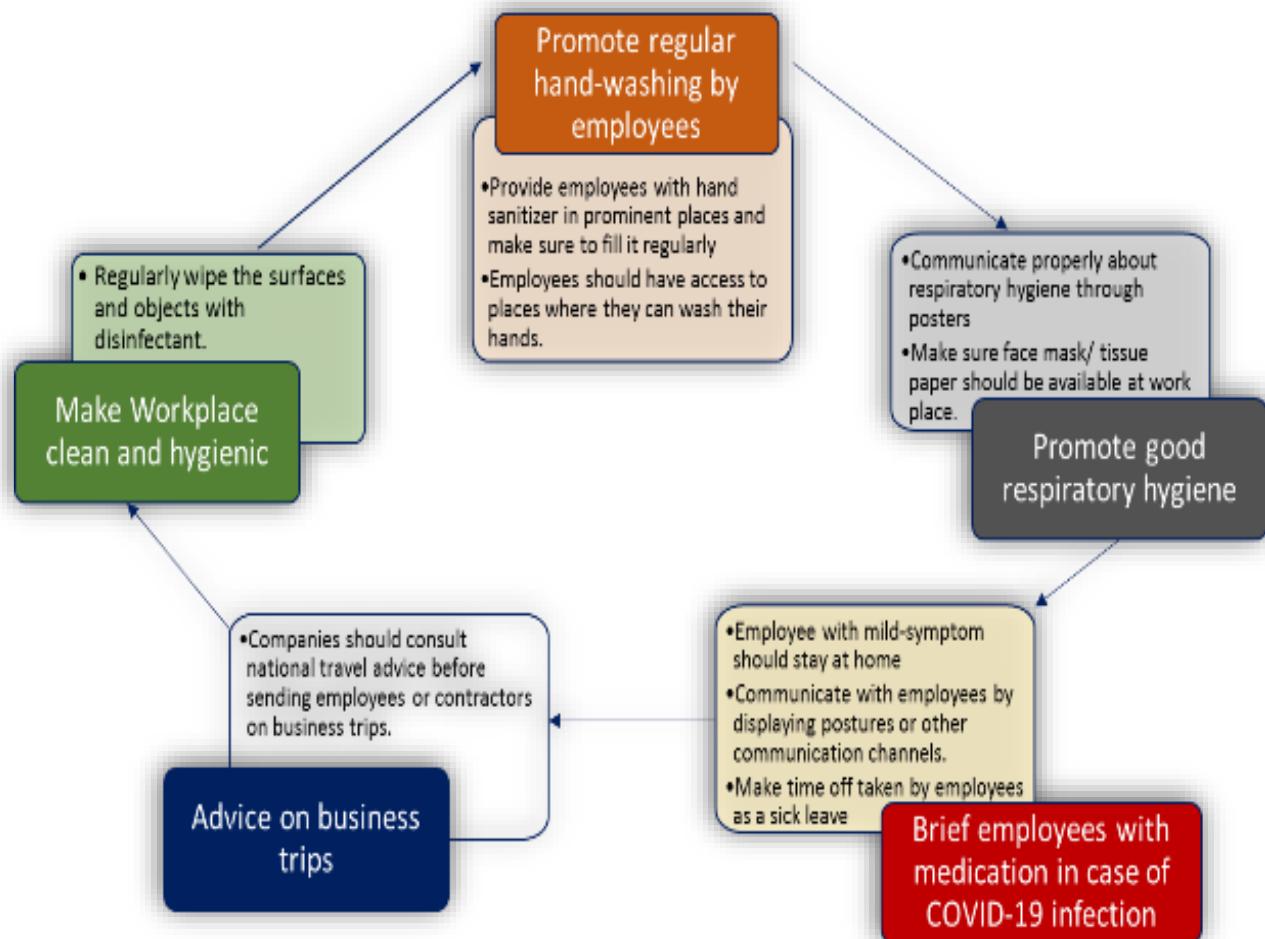
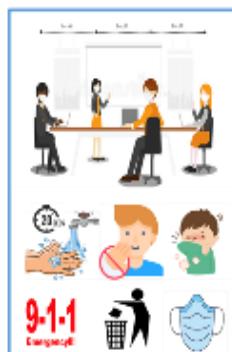


Figure 28: Ways to prevent COVID-19 in workplace

4.3.2.2 Advice given by WHO on the precautions one must take while attending a meeting and after the meeting.

DURING THE MEETING



- Provide information or a briefing, on COVID-19 and the measures in place to ensure the safety of participants.
- Encourage regular hand-washing or use of sanitizers.
- Encourage participants to cover their face with the bend of their elbow or a tissue if they cough or sneeze. Supply tissues and closed bins to dispose of them in.
- Provide contact details or a health hotline number that participants can call for advice.
- Arrange seats so that participants are at least one meter apart.
- Display dispensers of alcohol-based sanitizers prominently around the venue.
- Open windows and doors whenever possible to make sure the venue is well ventilated.
- If anyone starts to feel unwell, follow your preparedness plan or call your hotline.
 - Depending on the situation in your area, or recent travel of the participant, place the person in the isolation room. Offer the person a mask so they can get home safely, if appropriate, or to a designated assessment facility.



AFTER THE MEETING



- If someone at the meeting was isolated as a suspected COVID-19 case, the organizer should let all participants know this. They should be advised to monitor themselves for symptoms for 14 days and take their temperature twice a day.
- Organisers must retain the contact details of all the participants for one month. This helps authorities to trace people who might have been exposed to COVID-19 patient during the event.
- Employees should stay at home and self-isolate, if they develop mild cough or low grade fever.

Figure 29: Precautions to take during and after the meeting

4.3.2.3 WHO advisory on the things to consider while travelling and before travelling

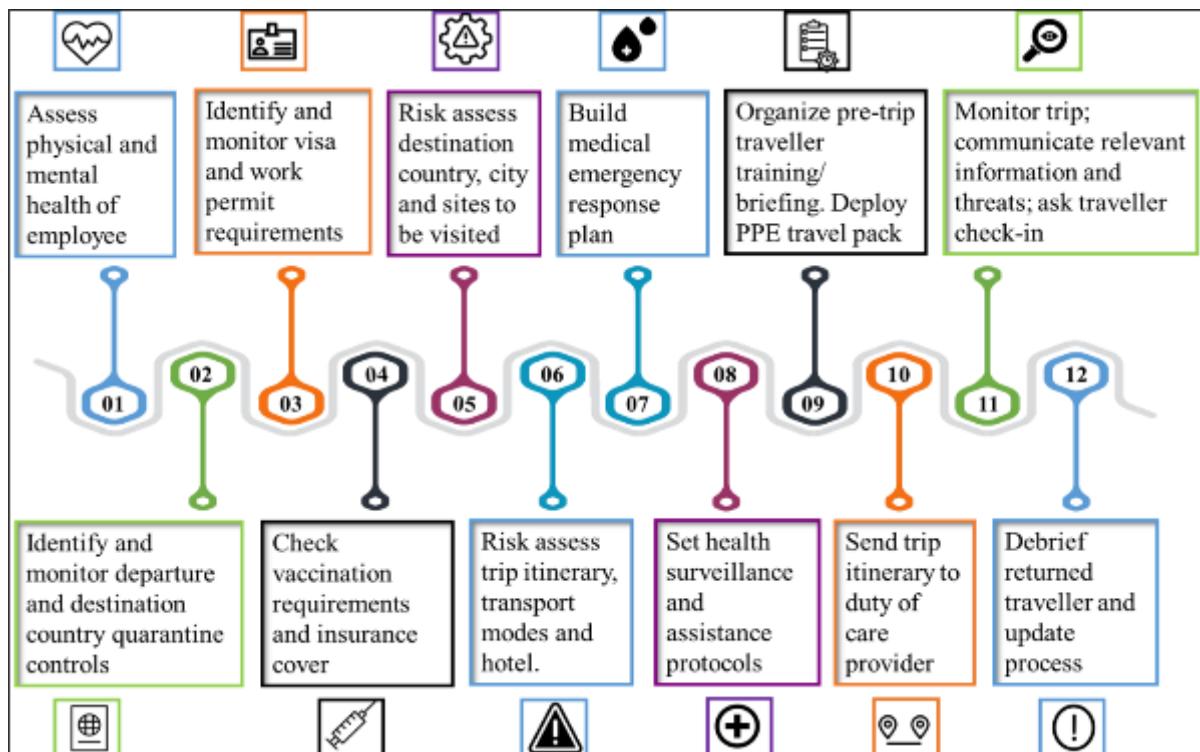


Figure 30: Due Diligence of pre-trip authorisation process

BEFORE TRAVELLING  	<ul style="list-style-type: none"> Organization should have latest information about the areas where COVID-19 is spreading and keep its employees informed about the same about the benefit and risks related to their travel. Avoid sending employee who are at higher risk of infection (older employee with co-morbidities etc.) Provide employees with small bottles of alcohol based hand rub. Companies should ensure that employees should be briefed about the location with COVID-19, they are travelling to by a qualified professional.
WHILE TRAVELLING  	<ul style="list-style-type: none"> Companies should ensure that their employees maintain hand hygiene and social distance of at least one meter from the people who are coughing or sneezing. Employee should be informed whom they should contact and what they should do when they feel ill while travelling. Companies should ensure that they should comply with the local authorities like any restrictions on gathering, movement and travel.
AFTER TRAVELLING 	<ul style="list-style-type: none"> Employees should monitor themselves for 14 days and check their temperature twice In case they have developed mild cough or low grade fever they should consult healthcare service provider and isolate themselves. They should avoid touching their family members

Figure 31: WHO advisory before travelling, while travelling & after travelling

4.3.2.4 WHO advise when any COVID-19 case arrives in your community

- I. If someone becomes ill with suspected COVID-19 at workplace, then
 - i. They should be isolated in a separate room in the workplace. Only limited number of people should be allowed to come in contact with them.
 - ii. Companies should inform local public health authority and seek their input.
 - iii. Identify person who might be at risk e.g. the person who might have travelled to COVID-19 area or the person who are at high risk due to co-morbidities.
- II. Organization should promote teleworking.
- III. Organization should develop contingency and business continuity plan for an outbreak in the area where the business operates.
 - i. It will help them prepare for an outbreak in their workplace or in communities.
 - ii. This plan will help organization in a situation when significant number of employees will not be able to come to the office either due to health problems or due to local restrictions.
 - iii. Companies must make their employees aware of the plan by communicating about it. They should lay emphasizes on staying at home even when the employees have mild symptoms. They should also address the importance of good mental health and consequences of a COVID-19 case in the workplace.
 - iv. For small and medium sized businesses, who do not have in-house health staff, should partner with local and social service providers for support in case of any emergency.

4.4 Preventive measure at School⁵¹

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.

4.4.1.1 School Administrators, Teachers and Staff

In order to promote a healthy environment, the schools should follow basic principles to keep students, teachers,

- 
- Sick students, teachers and staff should not be allowed to come to school.
- Schools should follow environmental cleaning and decontamination procedure properly and provide proper water, sanitation and waste management facilities.
- Social distancing norm should be followed.
- Schools should daily disinfect and clean surfaces.
- They should enforce proper hand washing techniques with soap. Alcohol rub/sanitizer or chlorine solution.





Figure 32: Basic preventive measures at school

4.4.1.2 Ensure Safe School Operations

WHO has advised schools to disinfect buildings and classrooms especially the surfaces which are frequently touched by the children like lunch tables, sports equipment, door, and window handles. They should develop school emergency and contingency plans and keep updating it. They should make sure that schools are not used as shelters, treatment units etc. and schools should also cancel any community meetings/ events that are held in school. In this pandemic, one has to be extra cautious at each and every step. They should try providing handwashing stations with soap and water or alcohol-based hand rub at the entrance and exit of the classroom, near lunchrooms and toilets.

Social distancing practices that can be implemented in school include: -

- I. If possible, maintain space of at least one meter between the children's desks
- II. Avoid unnecessary touching

⁵¹ 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

III. Avoid crowded situations like events, sports game, and assemblies

4.4.1.3 Establish procedures if someone become sick

School administration should ensure separating sick staff and students from the rest. There should be a proper process of informing parents and consulting with health care providers, take appropriate step wherever required and plan ahead with school staff and local authorities to update the emergency contact lists.

4.4.1.4 Promote information sharing

The national health and education authorities' issues guidelines. Follow and share these guidelines with parents, students, and staff. Schools should develop children friendly posters and it should be placed on notice boards, restroom, and other central locations. They should be able to address doubts of children and their concerns.

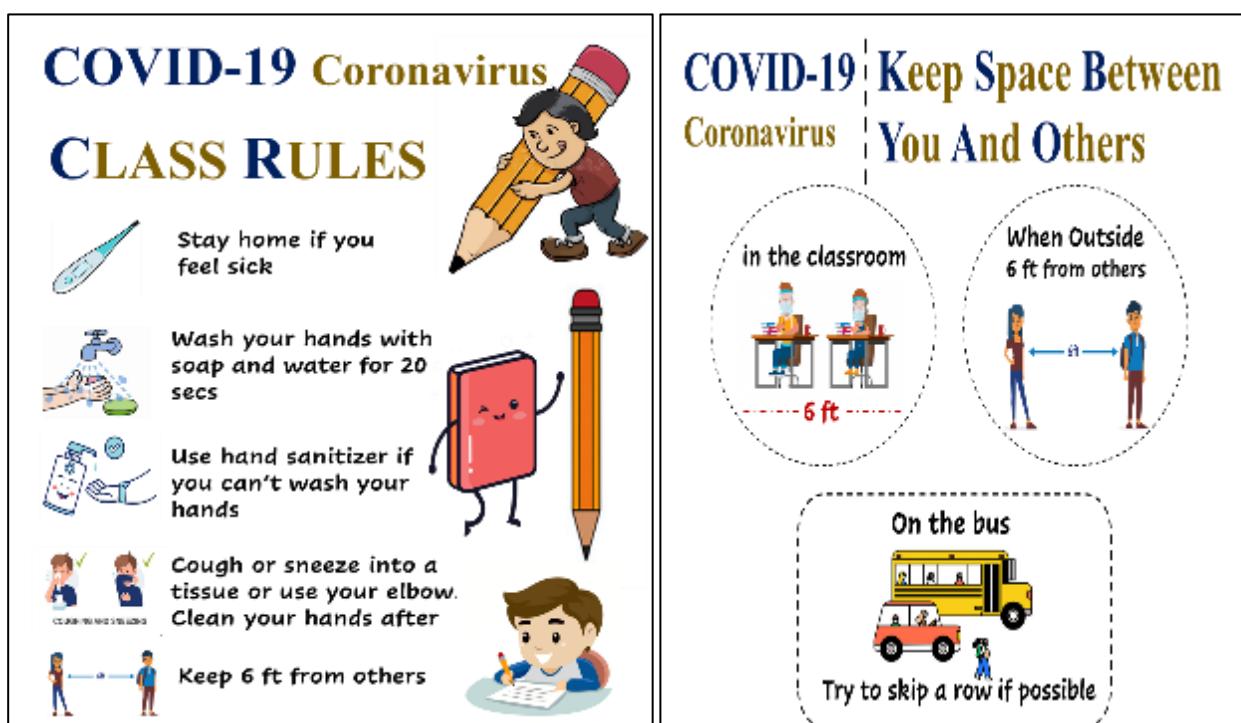


Figure 33: COVID-19 Coronavirus Class Rules⁵²

4.4.1.5 Adapt school policies where appropriate

In this pandemic, schools should discourage perfect attendance awards, rather they should develop flexible attendance and sick leave policies so that the student and staff who are sick can take the benefit of it. They should also make calendar changes in terms of exams and breaks.

⁵² <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-keep-space-when-outside.pdf>
<https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-class-rules.pdf>

4.4.1.6 Monitor school attendance

Schools should track the student and staff absenteeism with the help of proper monitoring system and compare it with actual absenteeism. If there is any increase in the student and staff absenteeism due to respiratory illness, report should be made to the local health authorities.

4.4.1.7 Plan for continuity of learning

In case of sick leave or temporary school closure, support continuous access to education by online classes, radio, podcast, or television broadcasts of academic content, assign teachers to give exercise for home study and follow up with the students weekly or daily. They should keep on developing educational strategies after reviewing it according to the situation.

4.4.1.8 Implement targeted health education

Schools should include activities and lessons related to disease prevention and control and integrate them and make sure that content is age, gender, ethnicity, and disability responsive.

4.4.1.9 Address psychosocial support needs

Encourage students to ask their questions and concerns with the teachers. They should guide students in an age appropriate manner, and in such a way that they support peers rather than bullying them. School health workers should help student and staff who are in distress due to COVID-19.

4.4.1.10 Parents/Caregivers and Community Members

- ❖ Coordinate with school for support related to school safety
- ❖ Monitor child's health and if they are sick, keep them home
- ❖ Teacher's should encourage students to ask questions.
- ❖ Parents/Caregivers should monitor child's health and keep them at home if they are ill.
- ❖ Teachers should ensure that they teach good hygiene practices.
 - Ensure safe drinking water
 - Frequently wash hands with soaps and safe water.
 - Ensure the safe collection, storage and disposition of waste.
 - Cover your face with tissue or elbow while sneezing, also avoid touching your face, eyes, mouth and nose

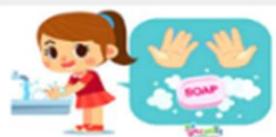


Figure 34: Basic preventive measures taken parents/caregivers and community members

4.4.1.11 Students and Children

Information about COVID-19 should be given to students through reputable sources like UNICEF, WHO and national health ministry advisories. They must be made aware of fake news which might circulate through word-of mouth or online sources.

4.4.1.12 Checklist for students and children

1

In a situation like this it is normal to feel sad, worried, confused, scared or angry. Know that you are not alone and talk to someone you trust, like your parent or teacher so that you can help keep yourself and your school safe and healthy.



- Ask questions, educate yourself and get information from reliable sources

2

Protect yourself and others



- Wash your hands frequently, always with soap and water for at least 20 seconds
- Remember to not touch your face
- Do not share cups, eating utensils, food or drinks with others

3

Be a leader in keeping yourself, your school, family and community healthy.



- Share what you learn about preventing disease with your family and friends, especially with younger children
- Sneezing or coughing into your elbow and washing your hands, especially for younger family members

4

Don't stigmatize your peers or tease anyone about being sick; remember that the virus doesn't follow geographical boundaries, ethnicities, age or ability or gender.

5

Tell your parents, another family member, or a caregiver if you feel sick, and ask to stay home.

Figure 35: Checklist for students and children

4.4.1.13 Age specific health education

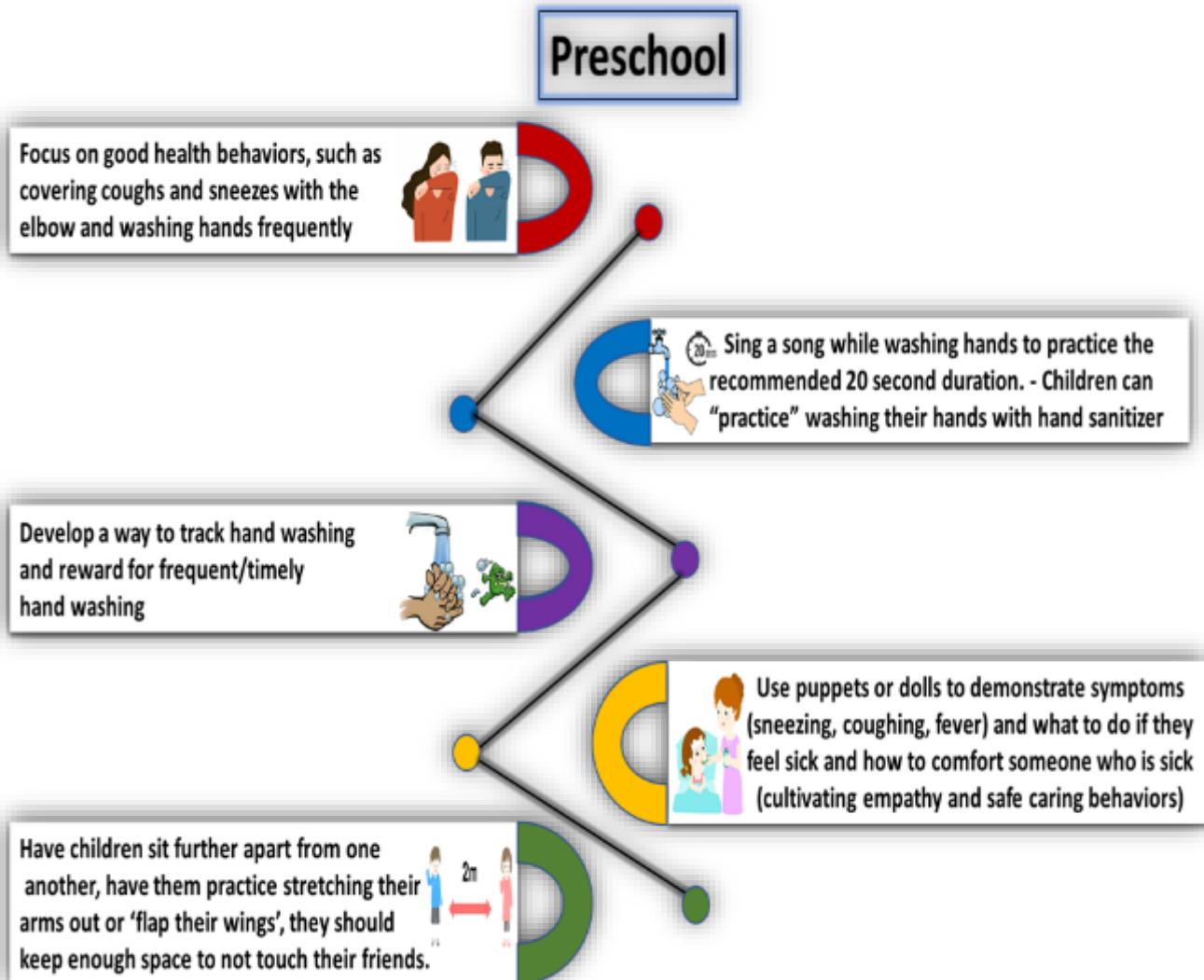


Figure 36: Preventive measures taken at preschool

Primary School

1

Communicate with children

- Make sure to listen to children's concerns and answer their questions in an age-appropriate manner; don't overwhelm them with too much information. Encourage them to express and communicate their feelings. Discuss the different reactions they may experience and explain that these are normal reactions to an abnormal situation.



2

Emphasize that children can do a lot to keep themselves and others safe

- Introduce the concept of social distancing (standing further away from friends, avoiding large crowds, not touching people if you don't need to, etc.)
- Focus on good health behaviors, such as covering coughs and sneezes with the elbow and washing hands



3

Help children understand the basic concepts of disease prevention

- Help children understand disease prevention and control. Use exercises that demonstrate how germs can spread. For example, by putting colored water in a spray bottle and spraying over a piece of white paper. Observe how far the droplets travel.



4

Demonstrate why it is important to wash hands for 20 seconds with soap and water

- Put a small amount of glitter in students' hands and have them wash them with just water, notice how much glitter remains, then have them wash for 20 seconds with soap and water



5

Have students analyze texts to identify high risk behaviors and suggest modifying behaviors

- For example, a teacher comes to school with a cold. He sneezes and covers it with his hand. He shakes hands with a colleague. He wipes his hands after with a handkerchief then goes to class to teach. What did the teacher do that was risky? What should he have done instead?

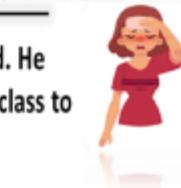


Figure 37: Preventive measures taken at Primary School



Lower Secondary School

Make sure to listen to students' concerns and answer their questions.

Emphasize that students can do a lot to keep themselves and others safe.

- Introduce the concept of social distancing
- Focus on good health behaviors, such as covering coughs and sneezes with the elbow and washing hands
- Remind students that they can model healthy behaviors for their families



Encourage students to prevent and address stigma

- Discuss the different reactions they may experience and explain these are normal reactions to an abnormal situation. Encourage them to express and communicate their feelings



Build students' agency and have them promote facts about public health.

- Have students make their own Public Service Announcements through school announcements and posters



Incorporate relevant health education into other subjects

- Science can cover the study of viruses, disease transmission and the importance of vaccinations
- Social studies can focus on the history of pandemics and evolution of policies on public health and safety
- Media literacy lessons can empower students to be critical thinkers and makers, an effective communicators and active citizens

Figure 38: Preventive measures at Lower Secondary School

Upper Secondary School



1

Make sure to listen to students' concerns and answer their questions

2

Emphasize that students can do a lot to keep themselves and others safe.

3

Incorporate relevant health education into other subjects



4

Have students make their own Public Service Announcements via social media, radio or even local tv broadcasting



5

Media literacy lessons can empower students to be critical thinkers and makers, effective communicators and active citizens.

Figure 39: Precautionary measure at Upper secondary school

4.5 Colleges and Universities

4.5.1 Considerations for Institutes of Higher education⁵³

On 08 September 2020, Government of India 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 risk of COVID-19 increases as more the people interact with each other. Thus, in these institutes' management must ensure that faculty and students should engage in virtual learning options, 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 speed

⁵³ <https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html>

- i. Stay home and self-isolate when appropriate
Encourage students, faculty, and staff to stay at home who have been tested positive for COVID-19, have been sick with COVID-19 symptoms or have been exposed to someone with COVID-19 and once they are back educate them on when to stay at home or self-isolate in their rooms.
 - ii. Hand hygiene and respiratory etiquette
Encourage students, faculty, and staff to cover their mouth while coughing and sneezing with a tissue or inside of your elbow. Throw the used tissue in the trash and wash hands immediately for at least 20 seconds with soap and water or use hand sanitizer that contains 60% alcohol.
 - iii. Masks
The respective authority should reinforce use of masks among students, faculty, and staff. They should be reminded not to touch the masks and wash their hands frequently. Masks should not be placed on the person who has trouble in breathing or anyone who is unable to remove mask without any assistance.
 - iv. Adequate supplies
Provide adequate supplies of hand sanitizers containing 60% alcohol, soaps, paper towels, tissues, disinfectant wipes, masks, no touch/foot pedal trash cans.
 - v. Signs & Messages
Post signs in visible locations like building entrances, restrooms, dining areas etc. that promote everyday protective measures and include, messages through videos that shows how to stop the spread of COVID-19.
-
- II. Maintain Healthy environment
 - i. Cleaning and disinfection
The institutes should consider cleaning frequently touched surfaces on a routine basis also they should make sure that common use objects like lab equipment, computer equipment should be used in a limited way. It becomes utmost important to encourage faculty, students, and staff to keep their personal items and personal work area clean and use disinfectant wipes to wipe objects used commonly.
 - ii. Shared objects
To control the transmission, discourage the sharing of items that are difficult to clean. There should be adequate supply to minimize the sharing of high touch materials. Institute authorities should inform everyone to not to share electronic devices, books, pens, and other learning aids.
 - iii. Ventilation
To increase the circulation of outdoor air, make sure that the ventilation systems are operating properly. If in case it is posing a safety and health risk do not open doors and windows.
 - iv. Water systems
Recent case in Hong Kong has shown the COVID-19 transmission virus through drainpipes. Hence, all of the water system - like sink faucets, drinking water etc. are cleaned and working properly after long shutdown due to lockdown.
 - v. Modified Layouts
Maintain a distance of at least 6 feet in the class by adjusting seats and rows. It will help to host smaller classes in large rooms. In case of laboratory work, provide adequate space between the individuals who are engaged in laboratory experiments.

- vi. Physical Barriers and Guides
For maintaining the social distancing, institution authorities can use tape on the floors, sidewalks, or signs on walls to ensure six feet distance between the individuals. If possible, put physical barriers in areas where it is difficult to maintain six feet distance.
- vii. Communal Spaces
Add physical barrier and restrict the number of people in closed spaces like dining halls, exercise rooms, game rooms and lounges etc. to restrict the number of people so that everyone can maintain 6 feet distance. Physical barriers can also be put between bathroom sinks and between bed where social distancing cannot be maintained.
- viii. Food service
Make the best possible use of disposable food service items and if it is not there, handle non-disposable items with gloves and wash the dishes with dish soap and hot water. Remove the hand gloves and wash their hands afterwards.

III. Maintain healthy operations

- i. Protection for students, Faculty, and staff at higher risk for severe illness from COVID-19
Give options like virtual learning opportunities, telework and modified job responsibilities to students, staff, and faculty to exercise when they are at high risk of illness.
- ii. Regulatory awareness
Keep yourself updated with state or local regulatory agency policies about social gathering and to determine if events can be held or not.
- iii. Gatherings
If events are held, if possible, pursue for virtual group to promote social distancing and limit the group size as much as possible and limit any nonessential visitors, volunteers, and activities.
- iv. Telework and Virtual Meetings
Encouraging telework for faculty and staff, replacing in-person meeting with video or tele-conferences, providing virtual support to the students, providing the facility of flexible working hours or learning hours as a practice for social distancing, are the few steps that could be taken.
- v. Travel and Transit
Various precautions should be taken for e.g. limit the non-essential travel, prefer to commute during less busy hours, and encourage faculty, staff, and students to use that mode of transportation which requires less contact with others.
- vi. Designated COVID-19 point of contact
There should be one dedicated office which can respond to COVID-19 concerns and everyone should be aware of it.
- vii. Communication system
System should be in place according to the applicable law and policies. In case of any exposure to COVID-19, notify the family, faculty, staff, students etc.
- viii. Leave (Time Off) and excused absence policies
Encourage people, staff, and students to take flexible leave by implementing flexible sick leave policies and practices.
- ix. Back-up staffing plan and staff training

- Maintain a roster of trained back-up staff and monitor the absenteeism of the staff, faculty, and employees.
 - x. Recognize signs and Symptoms
Encourage staff, students, and faculty to conduct daily health check up or encourage them to do self-checks. It must be in accordance with the regulation issued by the regulatory.
 - xi. Sharing Facilities
Follow the guidelines issued by the government while sharing the facilities.
- IV. Prepare for when someone gets sick
- i. Advise sick individuals to stay at home
All the faculties, students and staff should not come to the classes until they met the criteria to end home isolation.
 - ii. Isolate and transport those who are sick
If someone is sick, they should immediately be referred to the healthcare facility or home depending on the severity of their symptoms. They should identify isolation room, building/floor, or area to separate COVID-19 patients or those individuals who are sick but are not showing any symptoms but safely transporting them to that area.
 - iii. Clean and disinfect
Keep the COVID patient in a closed space and disinfect it after waiting for at least 24 hours.
 - iv. Notify health officials and close contacts
Inform local authorities and close contact of a person who is diagnosed with COVID 19. Immediate members of the COVID patient should be asked to stay at home and monitor their symptoms.

4.5.2 Guidance for Administrators of Institutions of Higher Education⁵⁴

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 40: When Confirmed Cases are in Campus

⁵⁴ <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-ihe-response.html>

COVID-19 Coronavirus

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 41: When There is No Community Transmission in IHE

COVID-19 Coronavirus

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 42: When There is Minimal to Moderate Community Transmission in IHE

4.5.3 Testing in Institutions of Higher Education⁵⁵

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.

4.5.4 Guidance for Student Foreign Travel⁵⁶

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 places⁵⁷

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

⁵⁵ <https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/ihe-testing.html>

⁵⁶ <https://www.cdc.gov/coronavirus/2019-ncov/community/student-foreign-travel.html>

⁵⁷ <https://www.mohfw.gov.in/pdf/2SoPstobefollowedinReligiousPlaces.pdf>

transmission. 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.

Following are the generic preventive measures issued by the government: -

- I. Mandatory use of face masks/ covers.
- II. Maintain minimum distance of 6 feet in public areas/ spaces.
- III. Individual must practice hand washing even if hands are not dirty. Use of alcohol-based sanitizer must be made available wherever feasible.
- IV. Follow respiratory etiquettes properly by covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and disposing off used tissues immediately in a proper manner.
- V. Spitting should be strictly prohibited.
- VI. All the individuals should be advised to install and use Aarogya Setu App.

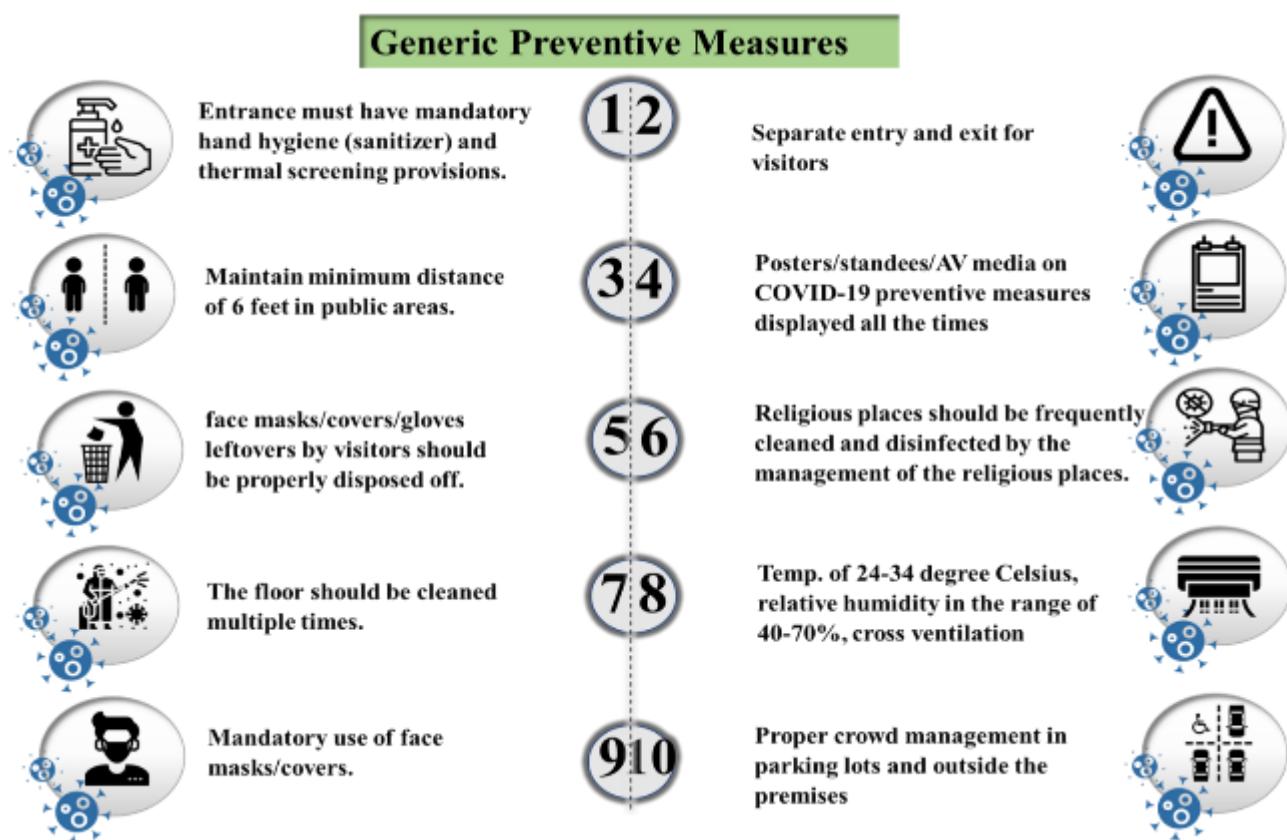


Figure 43: Generic preventive measure at Religious places

Religious places have responsibilities to prevent the spread of COVID-19 and are required to incorporate measures to that effect. The guidelines have made a provision of mandatory sanitizer dispensers and thermal screening at the entrance where only asymptomatic persons and 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.

Following are the other guidelines issued for religious places: -

- I. Entrances must have mandatory hand hygiene (sanitizer) and thermal screening provisions.
- II. Display posters on preventive measures about COVID-19. Audio and video clips to spread the awareness on preventive measures should be regularly played.
- III. If possible, staggering of visitors should be done.
- IV. Individuals should take out shoes/footwear in their own vehicle or if needed there should be separate slot for each individual/ family by the person themselves.
- V. In the parking lots and outside the premises, there should be proper crowd management by following social distancing norms in an organized manner.
- VI. Shops, Stalls, cafeteria etc. within and outside the premises should also follow social distancing norms.
- VII. Seating arrangement should be made in such a way that social distancing is maintained.
- VIII. As per the guidelines of CPWD, the temperature setting of all the air conditioning devices should be in the range of 24-34 degree Celsius, relative humidity in the range of 40-70%, cross ventilation should be adequate and intake of fresh air should be as much as possible.
- IX. Visitors should not be allowed to touch the idols of statutes/ idols/ holy books etc.
- X. Large gathering should be prohibited.
- XI. Choir of singing groups should not be allowed instead recorded devotional music/ songs should be played.
- XII. Devotees should bring their own prayer mat or piece of cloth and common prayer mat should be avoided.
- XIII. No sprinkling of holy water/ offering or distribution of prasad be allowed. Langars/ community kitchens/ ann-daan etc. should follow strict social distancing norms.
- XIV. Religious places should be frequently cleaned and disinfected by the management of the religious places. Also, there should be effective sanitation at lavatories, hand, and foot washing stations/ areas.
- XV. The floor should be cleaned multiple times.
- XVI. The management of the religious places should ensure that the face masks/ covers/ gloves leftovers by visitors should be properly disposed of.
- XVII. If in case of any suspect or confirmed case in the premises:
 - i. Place the person in room or area which is isolated from others.
 - ii. Provide the person with a mask/ face cover till the time he is examined by the doctor.
 - iii. Immediately inform the nearest hospital/ medical facility or call the State or district helpline.
 - iv. Designated public health authority will do a risk assessment and accordingly further action will be initiated regarding management of the case, his/ her contacts and need for disinfection.
 - v. Disinfect the premises if the suspected person is found positive.

4.7 Hotels & Restaurants⁵⁸

Hospitality industry has been 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.

Generic Preventive Measures

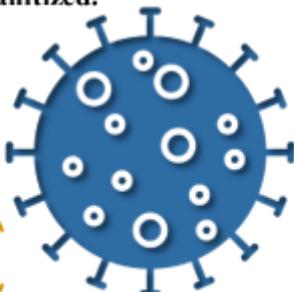
	Entrance must have mandatory hand hygiene (sanitizer) and thermal screening provisions.		Maintain social distancing norms
	Only asymptomatic staff and guest should be allowed to enter.		Temp. of 24-34 degree Celsius, relative humidity in the range of 40-70%, cross ventilation
	Face covers/masks left by staff/guest should be properly disposed.		Regularly deep clean all the washrooms. Each time a guest leave room and other services should be properly sanitized.
	Properly by covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and then dispose off used tissue properly in a dustbin.	   	
	Proper crowd management in parking lots and outside the premises		

Figure 44: Generic preventive measures at hotels and restaurants

Generic preventive measures for hotels are mentioned below: -

- I. People with co-morbidities, pregnant women, and children below 10 years of age, person above 65 years of age should stay at home, except for essential and healthy purpose.
- II. The generic measures need to be taken care of and to be observed by all the staff and guests in the premises at all time.

⁵⁸ <https://www.mohfw.gov.in/pdf/5SoPstobefollowedinHotelsandotherunits.pdf>

- i. Face covers/ masks should be made mandatory and people should follow social distancing rule as far as possible.
- ii. Follow respiratory etiquettes properly by covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and then dispose off used tissue properly in a dustbin.
- iii. Spitting should be strictly prohibited.
- iv. Individuals should monitor their health properly and in case of any illness should report to state and district helpline.
- v. All should be advised to install Aarogya Setu App.

Hotels and hospitality units have major role in controlling the transmission of COVID-19. They should take extra precaution while providing accommodation and other tourist services by minimizing possible physical contacts between staff and the guest. When it comes to arrangement, hotels should ensure the following measures are met: -

- I. Entrance should have mandatory thermal screening and hand hygiene (hand sanitizer) at the entrance.
- II. Staff and guests should only be allowed to enter only if they are wearing face cover/masks. It should be worn through the time in the hotel. Staff should also wear gloves and take precautionary measure wherever required.
- III. Only asymptomatic staff and guest should be allowed to enter.
- IV. Hotel management should deploy adequate manpower to ensure social distancing norms.
- V. Older employees, pregnant employees and employees who have underlying medical condition should take extra precaution. They should not be exposed to front line worker who are in direct contact with the public. Work from home should be facilitate wherever possible.
- VI. Congregations/ large gathering should be prohibited. There should be a proper crowd management in the hotel as well as outside e.g. parking lot and should follow proper social distancing norms.
- VII. If possible, valet parking should be operational with operating staff wearing face covers/mask and gloves. A proper care should be taken while disinfecting the steering, door handles, keys etc. of the vehicles.
- VIII. There should be a separate entry/exit for guests/staffs and goods/supplies, and it should be organized in such a way by specific markings that the physical distance of 6 feet is maintained while queuing up at entry and exit point.
- IX. Social distancing norms should be followed at elevator also by restricting the number of people. In escalator, one person on alternate step should be encouraged.
- X. Guest must provide details of travel history, medical condition etc. With ID and self-declaration at the reception
- XI. Hotel management should display posters/standees/AV Media on preventive measures about COVID-19.
- XII. Hand sanitizers must be provided to the guest at the reception. They should sanitize their hands before and after filling the forms including A&D register.

- XIII. Contactless processes like QR code, online forms, digital payments like e-wallets etc. must be encouraged.
- XIV. Luggage should be disinfected before sending it to the room. Also, guest who are old, pregnant, or who have underlying medical condition should be advised to take extra precautions.
- XV. Guests should be advised not to visit area which fall under the containment zone.
- XVI. They should take precautions while handling supplies, inventories and good in the hotel. They should also organize disinfection and queue management properly.
- XVII. Hotel management should provide appropriate personal protection gears like face cover/masks, gloves, and hand sanitizers etc. to the staff and the guests.
- XVIII. Hotels should encourage room services or take-away instead of dine-in. The staff for home deliveries should be screened thermally by the authorities before sending them for delivery. They should be advised to keep the packet at the door and not to be handed directly to the customer.
- XIX. In case of room service, there should be a communication through intercom /mobile phone, and it should be provided by maintaining adequate social distance.
- XX. Wherever possible children play areas/gaming arcades should remain closed.
- XXI. As per the guidelines of CPWD, the temperature setting of all the air conditioning devices should be in the range of 24-34 degree Celsius, relative humidity in the range of 40-70%, cross ventilation should be adequate and intake of fresh air should be as much as possible.
- XXII. Premises should be frequently sanitized with particular focus on lavatories, drinking and hand-washing station/areas.
- XXIII. Frequently touched surfaces like doorknobs, elevator buttons, handrails etc. in all guest service area and common areas should be cleaned and disinfect regularly with 1% sodium hypochlorite.
- XXIV. Face covers/masks left by staff/guest should be properly disposed.
- XXV. Regularly deep clean all the washrooms. Each time a guest leave room and other services should be properly sanitized.
- XXVI. Kitchens should sanitize at regular intervals. Staff should be asked to follow social distancing norms.
- XXVII. In case of suspect or confirmed case in the premises.
 - i. Isolate the person by keeping the person in separate room.
 - ii. Till the time he/she is examined by the doctor provide him/her mask.
 - iii. Immediately inform the nearest hospital/clinic or call the state or district helpline.
 - iv. Designated public health authority will do a risk assessment and accordingly further action will be initiated regarding management of the case, his/her contacts and need for disinfection.
 - v. Disinfect the premises if the suspected person is found positive
- XXVIII. Detailed guidelines for the restaurants
 - i. Follow social distancing norm while making sitting arrangement.

- ii. Encourage use of disposable menus.
- iii. Use of good quality disposable paper napkins should be encouraged and avoid the use of cloth napkins.
- iv. People should be advised to use digital mode of payment and contactless mode of ordering.
- v. Buffet services should follow social distancing norms among guests.

4.8 Shopping Malls⁵⁹

A shopping mall is frequently visited by large number of people. 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.

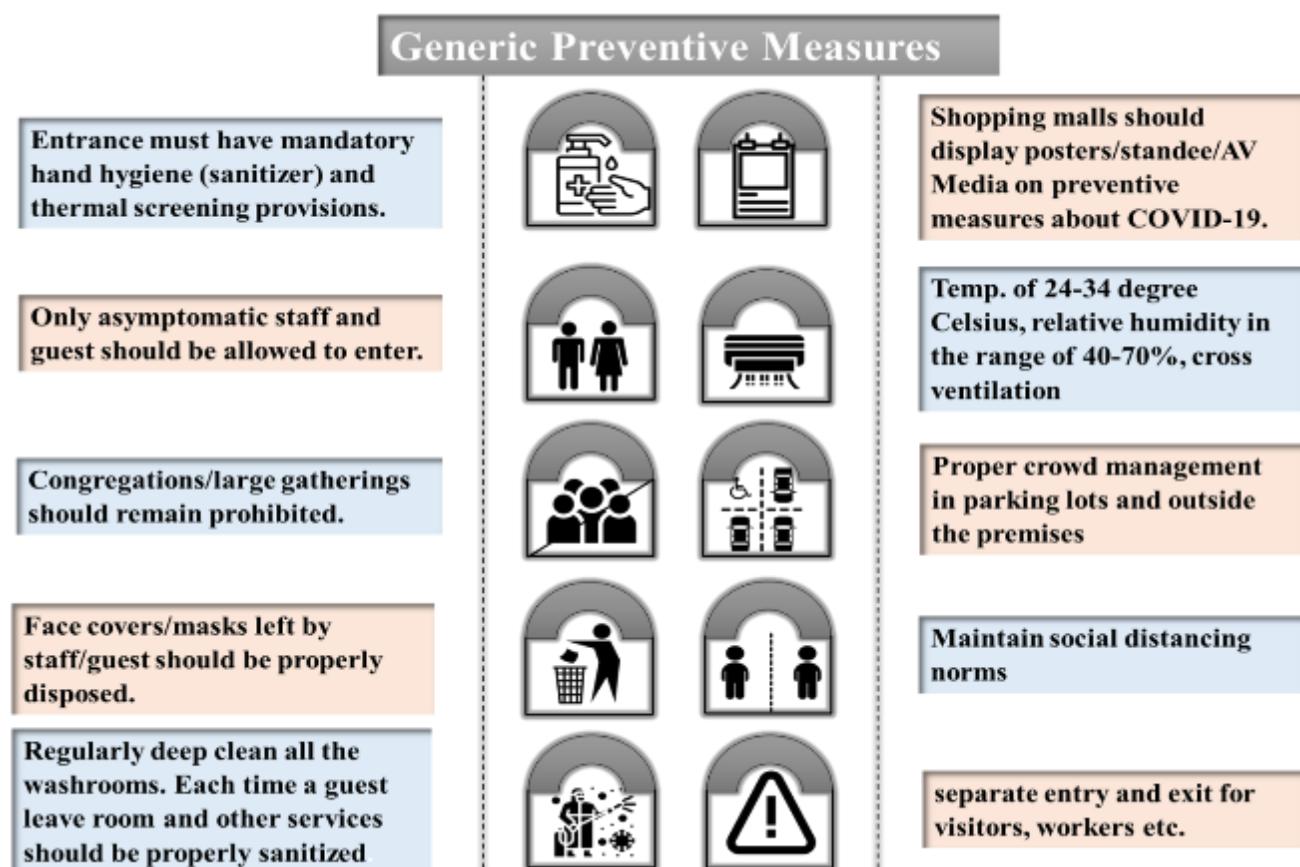


Figure 45: Generic Preventive measures at Shopping malls

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.

⁵⁹ <https://www.mohfw.gov.in/pdf/4SoPstobefollowedinShoppingMalls.pdf>

- I. Face covers/masks should be made mandatory and people should follow social distancing rule as far as possible.
- II. Follow respiratory etiquettes properly by covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and then dispose off used tissue properly in a dustbin.
- III. Spitting should be strictly prohibited.
- IV. Individuals should monitor their health properly and in case of any illness should report to state and district helpline.
- V. All should be advised to install Aarogya Setu App.

Shopping mall should ensure the following arrangements.

- I. Entrance should have mandatory hand hygiene and thermal screening provisions.
- II. Only asymptomatic customer/visitors should be allowed to enter.
- III. All workers/customers/visitors should be allowed to enter only if they are using face cover/mask. The face cover/mask is compulsory to use at all time in shopping mall
- IV. Shopping malls should display posters/standee/AV Media on preventive measures about COVID-19.
- V. Mall management should deploy adequate manpower to ensure social distancing.
- VI. If possible, staggering of visitors should be done.
- VII. Older employees, pregnant employees and employees who have underlying medical condition should take extra precaution. They should not be exposed to front line worker who are in direct contact with the public. Work from home should be facilitate wherever possible.
- VIII. Proper crowd management in the parking lot and outside premises should follow social distancing norms.
- IX. If possible, valet parking should be operational with operating staff wearing face covers/mask and gloves. A proper care should be taken while disinfecting the steering, door handles, keys etc. of the vehicles
- X. Shops, cafeteria, stalls etc. within and outside the premises should follow social distancing norms.
- XI. To ensure social distancing, special marking should be made at sufficient distance to manage the queue
- XII. There should be a separate entry and exit for visitors, workers etc.
- XIII. The shopping mall authorities should screen home deliveries thermally prior allowing them for home deliveries.
- XIV. They must ensure that appropriate precautions must be taken while handling supplies, inventories and good in the shopping mall.
- XV. While queuing up for entry and inside the mall, maintain a proper distance of 6 feet. To ensure the physical distance in the shop, number of customers should be kept at minimum. Also seating arrangement should be made in a way that adequate social distancing is maintained.

- XVI. Social distancing norms should be followed at elevator also by restricting the number of people. In escalator, one person on alternate step should be encouraged.
- XVII. As per the guidelines of CPWD, the temperature setting of all the air conditioning devices should be in the range of 24-34 degree Celsius, relative humidity in the range of 40-70%, cross ventilation should be adequate and intake of fresh air should be as much as possible.
- XVIII. Congregations/large gatherings should remain prohibited.
- XIX. Frequently touched surfaces like doorknobs, elevator buttons, handrails etc. in all guest service area and common areas should be cleaned and disinfect regularly with 1% sodium hypochlorite.
- XX. Face covers/masks left by staff/guest should be properly disposed.
- XXI. Regularly deep clean all the washrooms. Each time a guest leave room and other services should be properly sanitized.
- XXII. In food courts: -
 - i. There should be queue management to ensure social distancing.
 - ii. Not more than 50% capacity should be permitted to sit in food court and restaurants.
 - iii. Food court staff and waiters should wear mask and hand gloves and take other precautionary measures.
 - iv. Seating arrangement should be made in such a way to ensure social distancing norms are followed.
 - v. Workers should sanitize table each time customer leaves.
 - vi. The staff should follow social distancing in kitchen also.
 - vii. People should be advised to use digital mode of payment and contactless mode of ordering.
- XXIII. Gaming arcades, children play areas, cinema halls inside the shopping malls should remain closed.
- XXIX. In case of suspect or confirmed case in the premises.
 - vi. Isolate the person by keeping the person in separate room.
 - vii. Till the time he/she is examined by the doctor provide him/her mask.
 - viii. Immediately inform the nearest hospital/clinic or call the state or district helpline.
 - ix. Designated public health authority will do a risk assessment and accordingly further action will be initiated regarding management of the case, his/her contacts and need for disinfection.
 - x. Disinfect the premises if the suspected person is found positive

4.9 Gatherings and Community Events⁶⁰

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.



Figure 46: Important things to keep in mind in gatherings and community events

Guiding Principles for gathering and community events are mentioned below: -

I. Promote healthy behaviors that reduces spread.

Event planners should consider encouraging following behavior, that helps in reducing the spread of COVID-19: -

i. Stay home when appropriate

Educate staff and attendees to stay at home if they have tested positive for COVID-19 or they are showing symptoms of COVID-19. In such a scenario, they should stay at home and monitor their health. Event planners should devise policies that encourage sick people to stay at home. They should also develop flexible refund policies for attendees that involve participation fee.

ii. Hand hygiene and respiratory etiquette

⁶⁰ <https://www.cdc.gov/coronavirus/2019-ncov/community/large-events/considerations-for-events-gatherings.html>

Event planners should encourage their staff to cover their nose and mouth while sneezing and coughing with a tissue and after wards throw that tissue in a dustbin or garbage can and immediately wash their hands with soap or water for at least 20 seconds. If soaps are not available, hand sanitizer should be provided. This should be made as a practice which should be followed before, during and, after taking tickets. Encourage attendees to use gestures in spite of handshakes, fist bumps and high fives.

iii. Cloth face coverings

Cloth face coverings should be strongly encouraged with proper use, removal and washing of it. It becomes essential when maintaining social distancing is difficult. The staff should also be advised to not to use face cover for babies or children below 2 years of age, person who has trouble breathing, or a person who is unconscious, incapacitated, or a person who cannot remove face cloth without any assistance.

iv. Adequate supplies

Event planners should ensure adequate supply of soap, water, paper towels, hand sanitizer containing 50 percent alcohol, tissues, disinfectant wipes, cloth face coverings and no-touch trash cans.

v. Signs & Messages

On public address system, make regular announcement about how to reduce the spread of COVID-19 which should include messages about behavior that prevent spread of COVID-19. Also, post signs in highly visible location e.g. restrooms, entrance etc. to promote everyday protective measures. People who have limited vision or are blind, deaf, or hard of hearing, in that case event managers should display messages in alternative formats like large print, braille etc.

II. Maintain Healthy environment

Event planners can implement following strategies to maintain a healthy environment: -

Cleaning and Disinfection

- i. Clean and disinfect frequently touched surfaces like door handles, sink handles, hand railings etc. at least daily or as much as possible.
- ii. Clean and disinfect shared objects like table, countertop, bars etc.
- iii. When renting event space, ensure that the other groups follow disinfecting and cleaning routines daily.
- iv. Drivers of transport vehicle should ensure that they follow cleaning protocols daily.
- v. Make sure the safe use and storage of cleaner and disinfectant to avoid any harm to employees and individuals.
- vi. Keep children away from cleaning products. Make sure that there is enough ventilation while using these products to prevent any attendee or themselves from inhaling any toxic vapors.

Restrooms

- i. Do not allow crowds near the restroom and limit the number of people who occupy the restroom and ask them to maintain social distancing.

- ii. Ensure that restrooms are operational with functional toilets, clean and disinfected regularly and, supplies of handwashing - including soap and water or hand sanitizer with 60% alcohol, paper towels, tissues and no-touch trash cans are adequately available.

Ventilation

- i. Make sure to use proper ventilation equipment.
- ii. Take steps to minimize the blow of air from one person directly to another person so that the spread of aerosol containing virus can be reduced.
- iii. Make sure to increase the circulation of outside air by installing proper ventilation system.

Water Systems

In order to minimize the risk of spread of any disease through water make sure all water systems and features are properly working. Encourage staff and attendee to bring their own water to minimize the touching and use of water fountains.

Modified Layouts

- i. Use multiple entrance and exits to limit the crowded waiting areas.
- ii. Maintain social distancing of 6 feet by blocking rows or section of seating, limiting attendance, eliminate lines or queue by providing signs through tapes or chalk marks.
- iii. Try to provide outdoor activities so that social distancing can be ensured as much as possible.

Communal Space

- i. Use physical barriers in place where it is difficult to maintain 6 feet distance.
- ii. Make seating arrangement in such a way that 6 feet distance can be maintained.

Food service

- i. Encourage touchless mode of payments as much as possible. If payments are made through cash or card, ask customer to place them on receipt tray or counter rather than exchanging by hand.
- ii. Clean and disinfect frequently touched areas.
- iii. Provide signs on floors or walls to ensure social distance of 6 feet is maintained.
- iv. If cafeteria or group dining is used keep grab-and-go option or serve individually.
- v. Encourage use of disposable utensils and in case it is not used, handle non-disposable items with gloves and wash it with dish soap, water or in a dishwasher.
- vi. Individuals should wash their hands after handling food service items or after removing their gloves.
- vii. Avoid any self-serve food like buffet, consider pre-packaged boxes only.

Shared objects

- i. People should not share items that are difficult to clean, sanitize or disinfect.
- ii. Should limit the sharing of foods, tools, equipment, or supplies by staff members.
- iii. Minimize the sharing of high-touch materials as much as possible and if they are exchanged clean and disinfect between use.

III. Maintain healthy Operation

Event organizers can consider following strategies to maintain healthy operations: -

- i. Regularly update themselves about local or State regulatory agency policies related to group gatherings and check if events can be held.
- ii. Event manager should protect the staff and attendee who are at higher risk of illness from COVID-19. They should ensure that policies are in place to protect the privacy of people who are at higher risk. Also, they should limit the attendance of staff and attendee to local area only, and if it is open to people from other communities, city, or town then provide them information so that they can make informed decision about attending.
- iii. 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.
- iv. Designate a person who is responsible for handling COVID-19 concerns. All staff and attendee must be aware, and they should know how to contact them.
- v. Make leave policies and practices that helps employees to stay at home when they are sick or when they are taking care of someone who is sick. They should examine and revise policies for leave, telework, and employee compensation and ensure that it is properly communicated to staff. Create roster of trained back-up staff.
- vi. Develop policies for return-to-work after employee has COVID-19.
- vii. Conduct virtual training on all safety protocols so that social distancing is maintained during training also.
- viii. Conduct daily health check-ups of staff and attendees safely.
- ix. In case any other organization is sharing the same venue, encourage them to follow above considerations.
- x. Ensure proper separation of employees while reconfiguring parking lots and encourage employees to choose transportation option that minimize contact with others. They can also shift to commute at less busy times.
- xi. Attendees should not attend if they are exposed to or have symptoms of COVID-19. Encourage staff and attendee to self-report to event officials in case they have COVID-19 symptoms, or they are exposed to a COVID-19 patient.

IV. Preparing when someone gets sick

- i. In case if someone gets sick, advise that individual to stay at home and not to come to work.
- ii. Staff should immediately inform event planners if they are tested for COVID-19, become sick or exposed COVID-19 patients. They should be separated, sent home and advised to follow basic guidelines.
- iii. Immediately separate staff and attendee with COVID-19 symptoms. Individuals should go home or to a healthcare facility depending on the situation.
- iv. Event planner should work with local officials, healthcare providers, and venue administrators to identify and the isolate area in case any person is identified with COVID-19 symptoms.
- v. Ensure safe transportation of sick person to their home or to a healthcare facility.
- vi. Clean and disinfect the area used by the sick person.

- vii. Notify local health officials, staff, and attendee by maintaining the confidentiality as required by applicable laws and regulations.

4.10 Parks and recreational facilities⁶¹

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. There is a need to take precautions at these places as there is a high risk of transmission of the virus in such places.

4.10.1 Post Information to Promote Everyday Preventive Actions

During this pandemic, park administrators should post information or messages to promote visitors to take preventive actions every day. These messages should include following information: -

- I. Do not visit the park if you are sick and follow basic guidelines while taking care of yourself.
- II. Maintain social distance of 6 feet between others in the park. Use tissue or inside of the elbow while coughing and sneezing and dispose the tissue immediately into the trash.
- III. Use soap and water or hand sanitizer that contains 60% alcohol to wash their hands after going to the bathroom, coughing, or sneezing, before eating, and, after blowing your nose. supervise young children to use sanitizer safely.



Figure 47: Generic preventive measure at parks & recreational facilities

- IV. Do not touch eyes, nose mouth with unwashed hands.
- V. Use cloth face coverings when social distancing is difficult. But remember not to put it on children below 2 years of age, person who has trouble breathing and, anyone who is unconscious and cannot remove cloth face covering without any assistance.

⁶¹ <https://www.cdc.gov/coronavirus/2019-ncov/community/parks-rec/index.html>

4.10.2 Maintain Public Restrooms

Park administrators should open the restrooms which are operational, clean, disinfect and have handwashing supplies like soap and hand sanitizer. In case if restrooms are closed, notify the visitor in advance. Following are the important things to keep in mind:-

- I. Regularly clean and disinfect the toilets, especially high touch areas like doorknobs, light switches, faucets etc. Operate with functional toilets only.
- II. EPA registered disinfectants are effective against SARS-COV-2 virus. Use these disinfectants to clean the restrooms. Ensure these cleaning products are kept separately and away from children.
- III. Follow the guidelines for cleaning and disinfecting and accordingly plan and perform regular cleanings to reduce the risk of exposure to COVID-19 virus.
- IV. Keep enough stock of soap, paper towels, hand sanitizer with 60% alcohol and, no touch trash cans.
- V. Advise employees to use proper gloves while using disinfectants and follow direction mentioned on the label of the product.

4.10.3 Safety Measures for Staff

- I. Advise staff to stay at home when they are sick.
- II. Keep staff attendance and sick leave policies flexible.
- III. Encourage teleworking policies and identify staff who can work from home.
- IV. Revise the duties of staff who are at high risk of illness due to COVID-19.
- V. Keep staff informed about latest update on COVID-19 in the local area and park policies on a regular basis.
- VI. If staff develop symptoms similar to COVID-19 then immediately return them to home as soon as possible.
- VII. If there is a confirmed COVID-19 case in the staff, then inform other staff members about the risk of exposure while maintaining the confidentiality.

4.10.4 Miscellaneous

- I. Though this virus cannot be transferred through water, but extra care must be taken to avoid transmission like social distancing of 6 feet etc.
- II. Guidelines issued by national and local authorities about the limitation on the size of gathering should be monitored properly. Assess the current COVID situation and accordingly postpone, cancel or reduce the number of gatherings.
- III. Refer State and local regulations to re-open the playgrounds. Disinfect the playground properly especially hard surfaces and objects which are frequently touched by people. Make sure it is dried up before it is open for the children.
- IV. Monitor and close the area where people are likely to gather, to support social distancing norm. Post sign or board that discourage people to gather in large numbers.
- V. If there is any plan to resume camps and sports activities, consult public health officials. They can provide guidance on appropriate timings to resume activities.

4.11 Shared housing and institutions⁶²

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 prevention measures

- I. Maintain social distancing by staying 6 feet away from others and cover you face with cloth coverings.
- 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.
- II. Laundry rooms
 - i. Maintain adequate supplies of laundry facilities to help prevention of COVID-19.

⁶² <https://www.cdc.gov/coronavirus/2019-ncov/community/shared-congregate-house/guidance-shared-congregate-housing.html>

- 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 daily basis. We have mentioned below the precautions that we can take in our daily activities and help us and our closed ones from getting infected from novel Coronavirus.



Figure 48: 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 Checklist⁶³
 - 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 Quarters⁶⁴
 - 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 housings⁶⁵
 - 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 home⁶⁶
 - 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-19⁶⁷
 - 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 animals⁶⁸
 - i. If your pet is sick talk to veterinary doctor regularly and keep them separate from other people and pets at home.
 - ii. Monitor their symptoms and protect yourself while caring for a sick pet.
 - iii. When your pet is safe to roam, end home isolation.

⁶³ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/checklist-household-ready.html>

⁶⁴ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/living-in-close-quarters.html>

⁶⁵ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/shared-housing/index.html>

⁶⁶ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html>

⁶⁷ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/food-and-COVID-19.html>

⁶⁸ <https://www.cdc.gov/coronavirus/2019-ncov/animals/pets-other-animals.html>

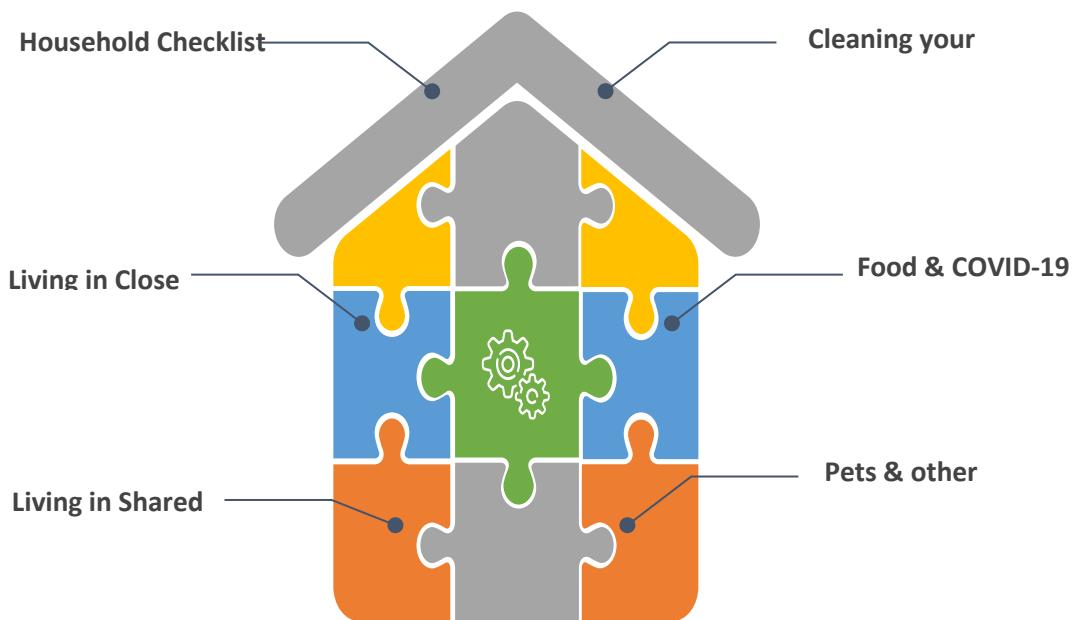


Figure 49: Important points to consider while taking preventive measure at home

4.12.2 Errands & Going Out⁶⁹

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. But it doesn't mean that care and precaution is not required. It is of utmost priority to prevent the spread of COVID-19 by developing the plan and monitor the absenteeism among the staff, assess group gatherings and events and, review plans for social distancing strategies⁷⁰.

In India⁷¹ schools and Colleges are likely to reopen after August 2020 and that to in a staggered manner for selected classes only. 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.

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: -

⁶⁹ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/essential-goods-services.html>

⁷⁰ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-childcare.html#General>

⁷¹ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>

<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.



Figure 50: Emotional challenges during COVID-19 pandemic

When a person is distressed, they can start taking alcohol⁷². They must be suggested to contact healthcare providers and take proper medication. Social distancing measure is keeping people at home. People⁷³ 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 children⁷⁴, teens⁷⁵ and young adults and give them the best support they need.

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>

⁷² <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/alcohol-use.html>

⁷³ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/abuse.html>

⁷⁴ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/for-parents.html>

⁷⁵ <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/young-adults.html>

4.12.6 Contact Tracing⁷⁶

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. We are in the third phase of unlock, 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 government of India has issued guidelines for unlock phase 3 on 29 July 2020. 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>

⁷⁶ <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 ² 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 51: Preventive measures before opening and after opening the yoga institutes

5 Government Initiatives

From the announcement of Pradhan Mantri Garib Kalyan Yojana to the launch of Atmanirbhar Bharat scheme various initiatives have been taken by GOI and RBI to alleviate financial stress due to COVID-19 outbreak (for more details please refer our Compendium Edition I,II ,III and IV). In continuation of aforementioned initiatives, the central government has announced following measures to further ease the financial stress: -

- I. Prime Minister Narendra Modi launched the Gareeb Kalyan Rojgar Abhiyaan⁷⁷ on June 20, 2020. It is aimed to boost employment and livelihood opportunities for migrant workers returning to villages, in the wake of COVID-19 outbreak. An amount of INR 50,000 crores has been earmarked for this scheme. Under the program, works that cover 25 kinds of skillsets and categories have been identified. These will help develop the villages of the country. This Abhiyaan will be implemented in a mission mode campaign in 125 days in 116 Districts of 6 States.
- II. PM CARES Fund Trust has allocated INR 2000 crore for supply of 50000 'Made-in-India' ventilators to government run COVID hospitals in all States/ UTs. Further, a sum of INR 1000 crore has been allocated for the welfare of migrant laborer.⁷⁸
- III. Union Cabinet chaired by Prime Minister Narendra Modi has approved a scheme for interest subvention of 2% for a period of 12 months, to all Shishu loan accounts under Pradhan Mantri Mudra Yojana (PMMY) to eligible borrowers. This Scheme is for implementation of one of the measures relating to MSMEs, announced under the Atma Nirbhar Bharat Abhiyan. Under PMMY, loans for income generating activities up to INR 50,000 are termed as Shishu loans.⁷⁹
- IV. On June 30, 2020 Prime Minister announced extension of PM Garib Kalyan Anna Yojana⁸⁰ till November 2020, to provide free ration for three months to more than 80 crore people i.e. providing 5 kg free rice/ wheat to each member of the family, along with providing 1 kg pulses to each family, per month.
- V. Cabinet has approved the extension of EPF contribution to 24% (12% employees share and 12% employers share) for another 3 months from June to August 2020 under PMGKY/Aatmanirbhar Bharat; with total estimated expenditure of INR 4,860 crore, the move will benefit over 72 lakh employees
<https://economictimes.indiatimes.com/wealth/personal-finance-news/government-to-pay-epf-contributions-of-employees-and-employers-till-aug-2020/articleshow/76853025.cms>
- VI. As on August 12, the Government⁸¹ has received over 5 lakh applications under the 'PM SVANidhi' scheme which aims to provide street vendors loans of up to INR 10,000

⁷⁷ <https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/06/2020062294.pdf>

⁷⁸ https://www.pmindia.gov.in/en/news_updates/50000-made-in-india-ventillators-under-pm-cares-fund-to-fight-covid-19/?comment=disable

⁷⁹ https://www.pmindia.gov.in/en/news_updates/2-interest-subvention-approved-on-prompt-repayment-of-shishu-loans-under-pradhan-mantri-mudra-yojana-for-a-period-of-12-months/?comment=disable

⁸⁰ https://www.pmindia.gov.in/en/news_updates/pm-addresses-nation-and-announces-extension-of-pradhan-mantri-garib-kalyan-anna-yojana/?comment=disable

⁸¹ https://www.assocham.org/uploadFiles/covid_notification_img/5f3a7f642050c.pdf

to restart their business post the COVID-19 lockdown. The number of loans sanctioned, and applications received under 'PM SVANidhi' scheme have crossed one lakh and five lakhs respectively within 41 days of commencement of the lending process on July 02, 2020.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1645282>

- VII. As on August 16, Indian Railways⁸² has generated more than 5.5 lakhs man-days of work under the Garib Kalyan Rozgar Abhiyan in Bihar, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, and Uttar Pradesh. Rail Minister Piyush Goyal is closely monitoring the progress made in these projects and generation of work opportunities for the migrant laborer of these states under the scheme. Around 165 Railway infrastructure projects worth 2988 crore rupees are being executed in these states. A total of 11296 workers have been engaged in this Abhiyaan. Payment of over 1336 crore rupees has been released to the contractors.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1646280>

- VIII. As on July 30, The All India Institute of Ayurveda (AIIA)⁸³, New Delhi has started providing free testing and treatment to patients in its COVID-19 Health Centre (CHC). Union AYUSH Minister Shri Shripad Yesso Naik says the CHC will provide free of cost testing and treatment facilities to all patients.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1642256>

- IX. As on August 06, the Centre⁸⁴ has released ₹890.32 crore as the second instalment of the COVID-19 Emergency Response and Health System Preparedness package to 22 States and Union Territories. The second instalment of the aid will be used to strengthen public health infrastructure for testing, including procurement and installation of RT-PCR machines, RNA extraction kits, TrueNat and CB-NAAT machines, bolster infrastructure for treatment and development of ICU beds, installation of oxygen generators and procurement of bedside oxygen concentrators among others.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1643694>

- X. The Ministry of AYUSH⁸⁵ on 14 August launched a three-month campaign aimed at increasing awareness about affordable and easy practices that can be adopted for enhancing immunity and preventing any disease. The campaign, called "Ayush for Immunity", was launched through a webinar which saw participation of more than 50,000 people.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1645799>

- XI. As on August 14, Government has distributed⁸⁶ more than three crore masks and 01 crore 28 lakh PPE kits to States, Union Territories and Central Institutions. The Union Health Ministry says, Government has been providing medical supplies free of cost to the State and Union Territory governments to supplement their efforts. Most of the

⁸²<https://timesofindia.indiatimes.com/india/generated-5-5-lakh-mandays-of-work-under-gareeb-kalyan-rozgar-abhiyan-in-6-states-railways/articleshow/77576991.cms>

⁸³ https://www.assocham.org/uploadFiles/covid_notification_img/5f2847ec37324.pdf

⁸⁴ https://www.assocham.org/uploadFiles/covid_notification_img/5f31751b15f43.pdf

⁸⁵<https://www.expresspharma.in/latest-updates/ayush-ministry-launches-campaign-for-awareness-on-affordable-immunity-boosting-practices/>
<https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/08/2020081743.pdf>

⁸⁶<https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/08/2020081711.pdf>
<https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/08/2020081711.pdf>

products supplied by the Centre were not being manufactured in the country in the beginning. The rising global demand due to the pandemic resulted in their scarce availability in the foreign markets. As a result, Atmanirbhar Bharat and Make in India has been strengthened and most of the supplies made by the Union Government are domestically manufactured. The Ministry says, more than 22000 Make in India ventilators have been delivered to various States, Union Territories and Central Institutions.

- XII. Raksha Mantri Shri Rajnath Singh⁸⁷ launched the initiatives of a number of modernization and up-gradation of facilities as also new infrastructure creation by Defense Public Sector Undertakings (DPSUs) and Ordnance Factory Board (OFB), through digital link on August 10th, as part of the of the Atmanirbhar week celebration of the Ministry of Defence (MoD). Prime Minister Narendra Modi gave a clarion call for Atma Nirbhar Bharat Abhiyaan and his 5-I formula of Intent, Inclusion, Investment, Infrastructure and Innovation is planned to put the economy on a high growth trajectory.
 - XIII. Govt launches e-portal⁸⁸ on August 17 tribal health & nutrition named 'Swasthya'. The portal provides all health and nutrition related information of the tribal population of India on a single platform. Swasthya will also curate innovative practices, case studies, and best practices collected from different parts of India to facilitate the exchange of evidence, expertise and experiences.
 - XIV. As on August 07, the central government⁸⁹ 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 scheme, announced in March, provides an insurance cover of ₹50 lakh to around 22 lakh public healthcare workers, including community health workers, coming in direct contact of COVID-19 patients or those at risk of infection.
 - XV. Prime Minister Narendra Modi on August 15 launched the National Digital Health Mission, while addressing the nation from Red Fort on India's 74th Independence Day. The initiative, which is technology based, will revolutionize the health sector in India. Every Indian under the mission would get an ID card containing all relevant information about his/ her medical conditions and treatments, tests etc. Every test, disease, diagnosis, and medical reports along with medicines will be stored in every citizen's health ID.
- <https://government.economictimes.indiatimes.com/news/digital-india/pm-modi-launches-national-digital-health-mission/77558766>
- XVI. The Chief Minister of Chhattisgarh Bhupesh Baghel has announced the launch of Padhai Tuhar Para Scheme (Education up to your locality), a new scheme on 15th August, Independence Day. Under the scheme, the students will be able to study in their own neighborhoods as classes were suspended due to the outbreak of COVID-19.

⁸⁷ <https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/08/2020081326.pdf>

<https://theopenview.in/2020/08/10/raksha-mantri-shri-rajnath-singh-launches-modernization-up-gradation-of-facilities-and-new-infrastructure-creation-of-defence-psus-and-ofb/>

⁸⁸ <https://cdnbbsr.s3waas.gov.in/s3850af92f8d9903e7a4e0559a98ecc857/uploads/2020/08/2020081894.pdf>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1646440#:~:text=Shri%20Arjun%20Munda%20inaugurated%20the,India%20in%20a%20single%20platform.&text=The%20portal%20http%3A%2F%2Fswasthya,is%20hosted%20on%20NIC%20cloud.>

⁸⁹ <https://www.livemint.com/news/india/centre-to-extend-insurance-scheme-for-health-workers-fighting-to-contain-covid-19-11596820392755.html>

Padhai Tunhar Para scheme aims to teach children with the help of the community in the villages. The scheme was launched to take the Padhai Tunhar Duar scheme, an online education platform further. The State government launched the scheme to benefit around 2.2 million children. Also, the CM has launched a Bluetooth-based program called 'Bultu ke Bol' with an aim to introduce and provide study materials to students in remote areas with no access to the Internet.

<https://www.hindustantimes.com/education/chhattisgarh-cm-announces-scheme-for-school-students/story-9CA5oHZv8FwBZv87ytWZMN.html%22>

- XVII. Assam State Government launched "Orunodoi scheme", a mega scheme for women's financial empowerment. Under the mega scheme, a district-wise selection of beneficiaries will begin from August 17. The beneficiaries will receive the amount in the bank account of a female family member on the first day of every month. The scheme will begin from the month of October 2020. The scheme will provide Rs.830 per month each to 17 lakh poor families under the ambitious "Orunodoi" scheme. The Assam State government has allocated a sum of INR 280 crore for the new scheme. It is expected that this will be the biggest scheme in Assam which will initially benefit at least 17 lakh families and the number would subsequently increase to 25 lakhs. The scheme aims to help poor households to meet their medical, nutritional, and academic needs besides to meet the additional spending during various festivals.

<https://todaybharat.com/english/news/assam-to-launch-mega-scheme-for-women-s-financial-empowerment-17397.html>

- XVIII. Chief Minister Bhupesh Baghel on August 09 announced the launch of Indira Van Mitan Yojana on the occasion of World Tribal Day. He says that under this scheme, groups of youth will be formed in 10,000 villages of tribal area of the State and all forest-based economic activities will be conducted through these groups. The groups will work to provide self-employment and prosperity of the forest dwellers. The scheme aims to add 19 lakh families from scheduled areas. The estimated cost of a unit would be around INR 10 lakh. An amount of INR 8.50 crore will be made available for the establishment of forest produce processing units in 85 development blocks of scheduled areas. <http://www.businessworld.in/article/Chhattisgarh-CM-launches-Indira-Van-Mitan-Yojana/09-08-2020-306803/>

- XIX. The Union Minister of Defence Rajnath Singh launched the Directorate General National Cadet Corps (DGNCC) Mobile Training App on 27 August 2020. The mobile Application will assist in conducting countrywide online training of National Cadet Corps (NCC) cadets. The DGNCC Mobile Training App will help the NCC cadets in digital learning and overcoming the difficulties posed by COVID-19 due to restrictions on direct physical interactions. The training app aims at providing NCC cadets entire training material including syllabus, training videos, précis, and frequently asked questions on one platform. The app is expected to provide a positive step towards automation of NCC training. The move is in line with Digital India vision of Prime Minister Shri Narendra Modi.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1648903>

- XX. The Ministry of Social Justice and Empowerment has launched a 24x7 toll-free mental health rehabilitation helpline 'KIRAN' on September 07, 2020. The Kiran mental health rehabilitation helpline number is 1800-599-0019. It aims to provide callers support for early screening, first-aid, psychological support, distress management, mental well-being, preventing deviant behaviors, psychological crisis management

etc. The helpline will offer services in 13 languages. The helpline has 660 volunteer clinical/ rehabilitation psychologists and 668 volunteer psychiatrists. It will run from 25 centers by 75 experts who can handle 300 callers per hour. The helpline consists of a three-level mechanism of support namely:

- I. At first, the caller will be connected to the location-based helpline center
- II. Secondly, the caller will be referred to rehabilitation/ clinical psychologists/ psychiatrists
- III. Finally, a follow-up and support will be extended at the third level

<https://theprint.in/health/govt-launches-kiran-a-24x7-helpline-for-people-to-seek-mental-health-counselling/497542/>

<https://fit.thequint.com/mind-it/indias-first-national-mental-health-helpline-kiran-is-launched>

- XXI. The National Bank for Agriculture and Rural Development (NABARD) launched Structured Finance and Partial Guarantee Program. The program aims to ensure the undisturbed flow of credit in COVID-19-affected rural areas. It will provide partial guarantee on pooled loans extended to small and mid-sized Microfinance Institutions (MFIs). It will help facilitate Rs.2,500 crore funding in the initial phase and is expected to be scaled up in the future. The program will cover over 1 million households across 28 states and 650 districts.

<https://economictimes.indiatimes.com/industry/banking/finance/nabard-launches-credit-guarantee-programme-for-nbfc-mfis/articleshow/77721060.cms?from=mdr>

- XXII. Government of India has launched "Chunauti", the Next Generation Start-up challenge contest in Bihar. The aim is to further boost software products and startups with a special focus on Tier-II towns of the country. The contest was launched by the Union Minister for Electronics and Information Technology, Ravi Shankar Prasad on 28 August 2020. The government has earmarked a budget of INR 95.03 Crore over a period of three years for this program. In the Chunauti contest, over 300 startups will be selected and provided various support from the Government through the Software Technology Parks of India centers, across India.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1649231>

- XXIII. The Union Minister for Commerce and Industry Piyush Goyal e-launched the National GIS-enabled Land Bank system at (iis.ncog.gov.in/parks) for 6 States. National GIS-enabled land bank system is being developed by the integration of the Industrial Information System with State GIS systems. The administrators and senior officers of the central and state governments, discussed the issues of pushing industrial manufacturing in the country, attracting investments, pushing the approach of One District One Product (ODOP). It aims to promote a National Movement towards AatmaNirbhar Bharat. All other States/ Union Territories (UTs) are expected to be onboarded by December 2020.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1648929>

- XXIV. The Union Minister of Law & Justice, Communications and Electronics & Information Technology Ravi Shankar Prasad launched “Swadeshi Microprocessor Challenge-Innovate Solution for #Aatmanirbhar Bharat” on 18 August 2020. The aim is to develop various technology products. Swadeshi Microprocessor Challenge is part of the measures taken by the Ministry of Electronics and IT to spur the technology-led

innovation ecosystem in the country. The challenge is open to the students at all levels and startups. The Challenge demands contestants to tinker with these Swadeshi Processor IPs and facilitate them with innovating the frugal solutions for societal needs. The challenge also aims to make available the entire home-grown ecosystem around Swadeshi Processors to develop the complex designs for catering to both global and domestic requirements in the near future. The detailed infographic is given below: -

<https://pib.gov.in/PressReleasePage.aspx?PRID=1646676#:~:text=Shri%20Ravi%20Shankar%20Prasad%2C%20Union,anda%20research%20in%20the%20country.>

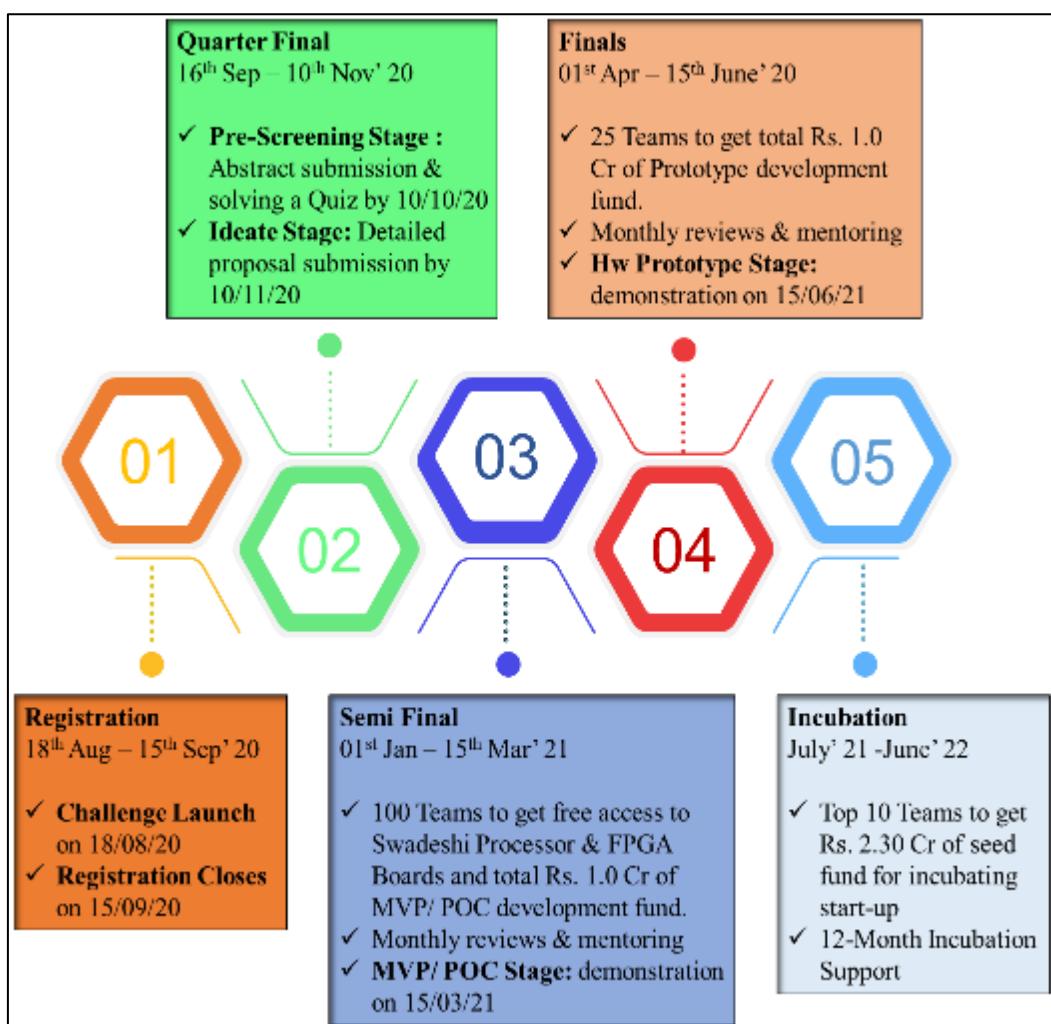


Figure 52: Swadeshi Microprocessor challenge

- XXV. The "Pradhan Mantri Garib Kalyan Package Insurance Scheme for Health Workers Fighting COVID-19", which was announced on March 30 this year for a period of 90 days, has been extended for a further period of 90 days i.e. up to 25th September 2020. The scheme has now been extended for another 180 days i.e. 6 months," according to a government release. The scheme provides an insurance cover of ₹ 50 lakhs to healthcare providers, including community health workers, who may have to be in direct contact and care of COVID-19 patients and therefore at risk of being infected. It also includes accidental loss of life on account of contracting COVID-19.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1654635>

- XXVI. The government of J&K has announced the Jammu and Kashmir Health Scheme in which the administration will provide a universal health insurance coverage to all the residents of the Union Territory. The Jammu and Kashmir Health Scheme will provide universal health coverage to nearly 70 lakh residents of the Union territory who are not covered under the Ayushman Bharat scheme.

<https://www.indiatoday.in/india/story/govt-announces-free-health-insurance-scheme-for-jammu-and-kashmir-residents-1721111-2020-09-12>

- XXVII. The Government launched YuWaah, a multi-stakeholder platform to make young people career ready. The project aims to support young people by providing entrepreneurship classes, both online and offline, with successful entrepreneurs and experts. The aim is to establish an entrepreneurial mindset among young people. It helps to boost the skills of the 21st-century young people, digital skills, life skills, through online and offline channels and support them through self-learning, for their productive lives and the future of work. It will provide career guidance support to young people through career portal and through job-readiness and self-exploration sessions to make young people career-ready.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1657751#:~:text=Government%20has%20launched%20YuWaah%20E2%80%93%20a,make%20young%20people%20career%20ready&text=Ministry%20of%20Youth%20Affairs%20%26%20Sports,multi%2Dstakeholder%20platform%20in%20India>

- XXVIII. The Centre and Reserve Bank of India informed the Supreme Court that the moratorium on residual loans can be extended to a period of up to two years on installments taken from March 1 to August 31. The details can be accessed at the link given below: -

<https://www.inventiva.co.in/stories/richard/supreme-court-extends-the-moratorium-period-on-repayment-of-loan-to-another-2-years/>

6 Government Guidelines & Regulations

The countrywide lockdown, which commenced on 24 Mar 2020 has been lifted w.e.f 08 Jun 2020. We are now in the 'Unlock Phase 5'. Government of India has issued series of guidelines and SOPs with a view to contain the spread of COVID - 19 outbreak and at the same time open businesses and offices to business as usual (as far as possible). The subsequent sub-sections cover latest relevant government issued guidelines and their respective links for detailed information.

6.1 Ministry of Home Affairs (MHA)

6.1.1 Unlock Phase 5 Guidelines

Ministry of Home Affairs has issued Unlock 5 guidelines on 30 Sept 2020, for opening up of more activities outside the containment zones and to extend lockdown inside the containment zones up to 31 Oct 2020. 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

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:

- Lockdown in containment zones
- No international air travel except as permitted by MHA
- Vulnerable persons above 65, people with comorbidities, pregnant women, children under 10 advised to stay home.

Figure 53: Unlock 5.0 guidelines

6.1.2 State wise Guidelines

Post release of Unlock 5.0 guidelines on 30 Sep 2020 several States have begun issuing their own set of guidelines for the Unlock 5.0. The State specific guidelines may be accessed at the website of the respective States.

6.2 Ministry of Health and Family Welfare (MoHFW)

6.2.1 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>

6.2.2 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>

6.2.3 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 09th to 12th 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>

6.2.4 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>

6.2.5 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>

6.2.6 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>

6.2.7 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>

6.2.8 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>

6.2.9 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>

6.2.10 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>

6.2.11 Guidelines on Safe Ophthalmology Practices in Covid-19 Scenario

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

6.2.12 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 30th June 2020 i.e. till 28th September 2020. The details of the guidelines can be accessed at the link given below: -

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

6.2.13 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 gymnasiums. The details of the guidelines can be accessed at the link given below : - <https://www.mohfw.gov.in/pdf/Guidelinesonyogainstitutesandgymnasiums03082020.pdf>

6.2.14 Revised guidelines for International arrivals

Ministry of Health and Family Welfare has issued revised guidelines for international traveler which is effective from 8 August. The details about complete guidelines can be accessed at the link given below :

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

6.2.15 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>

6.2.16 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>

6.2.17 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>

6.2.18 Protocol on Clinical Management Protocol for 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>

6.2.19 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/RevisedHomelocationGuidelines.pdf>

6.2.20 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>

6.2.21 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/90542653311584546120quarantineguidelines.pdf>

6.2.22 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>

6.2.23 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>

6.2.24 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>

6.2.25 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>

6.2.26 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/5SoPstobefollowedinHotelsandotherunits.pdf>

6.2.27 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>

6.2.28 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>

6.2.29 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>

6.2.30 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>

6.2.31 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>

6.2.32 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>

6.2.33 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)

6.2.34 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/GuidanceNoteonProvisionofessentialRMNCAHNServices24052020.pdf>

6.2.35 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>

6.2.36 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>

6.2.37 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>

6.2.38 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>

6.2.39 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>

6.2.40 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

6.2.41 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>

6.2.42 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 are placed at Annexure 'VI' and can be accessed here: -

<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

6.2.43 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>

6.2.44 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.](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 54: List of Hotels for quarantine

6.2.45 Guidelines for Home Quarantine⁹⁰

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>

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

⁹⁰ <https://www.mohfw.gov.in/pdf/Guidelinesforhomequarantine.pdf>

6.3 Airport Authority of India

6.3.1 State wise quarantine regulations for domestic passengers

On September 08, 2020, Airport Authority of India (AAI) has issued final state wise quarantine regulations for domestic passengers. COVID-19 test and thermal screening of the passengers at the airport has been mandated by all the states. 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 below given link: -

<https://www.aai.aero/sites/default/files/aaiupload/State-wise-Quarantine-Guidelines-final.pdf>

6.4 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>

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

Figure 55: Graded Resumption of Metro Lines

6.5 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>

6.6 Securities and Exchange Board of India (SEBI)

6.6.1 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 and 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

6.6.2 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

6.6.3 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

6.7 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

6.8 Ministry of Civil Aviation (MoCA) - Order

6.8.1 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:-

[https://www.civilaviation.gov.in/sites/default/files/RT-PCR Testing at the entry airport dated 29 09 2020.pdf](https://www.civilaviation.gov.in/sites/default/files/RT-PCR%20Testing%20at%20the%20entry%20airport%20dated%2029%2009%202020.pdf)

6.8.2 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

6.8.3 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

6.8.4 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>

6.9 Government of India (MyGov)⁹¹

<https://www.mygov.in/covid-19/>

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/>

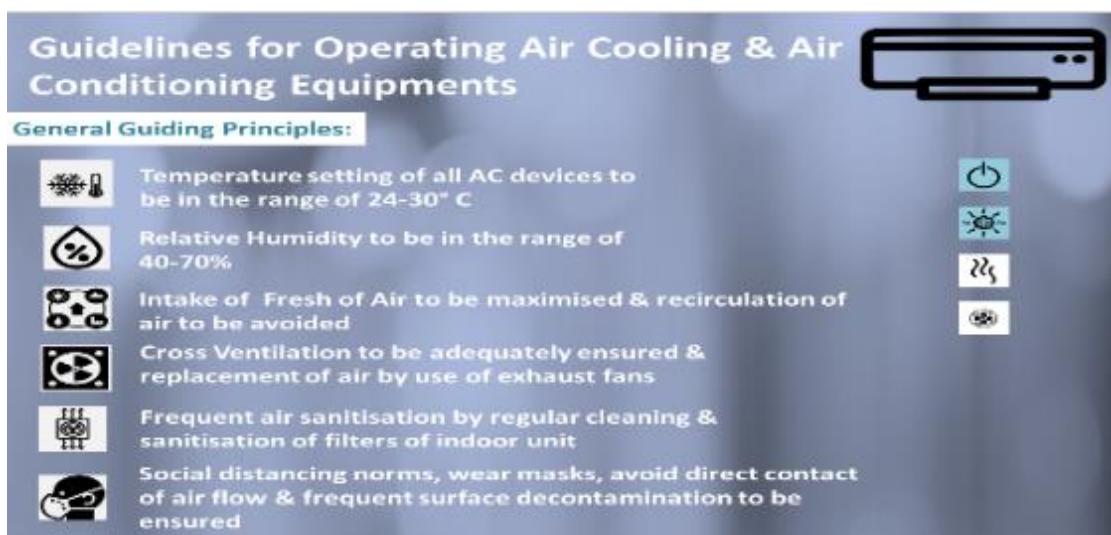


Figure 56: Guidelines for Operating Air Cooling and Air Conditioning Equipment

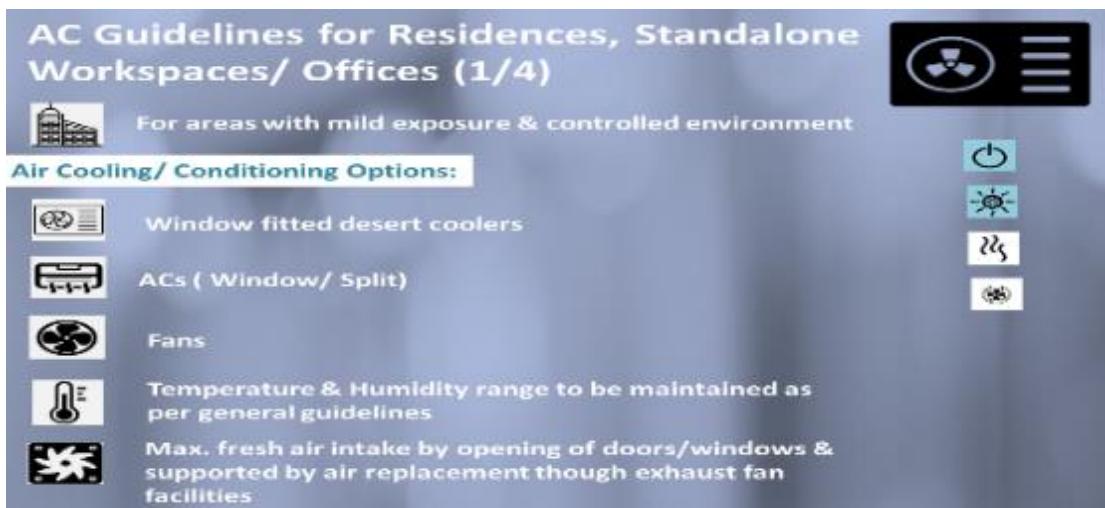


Figure 57: AC Guidelines for Residences, Standalone/ Workspaces/Offices

⁹¹ https://www.mha.gov.in/sites/default/files/MHAOrderextension_1752020.pdf

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



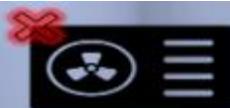
Max. fresh air intake by opening of doors/windows & supported by air replacement through exhaust fan facilities

Figure 58: 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 59: AC Guidelines for Institution etc.

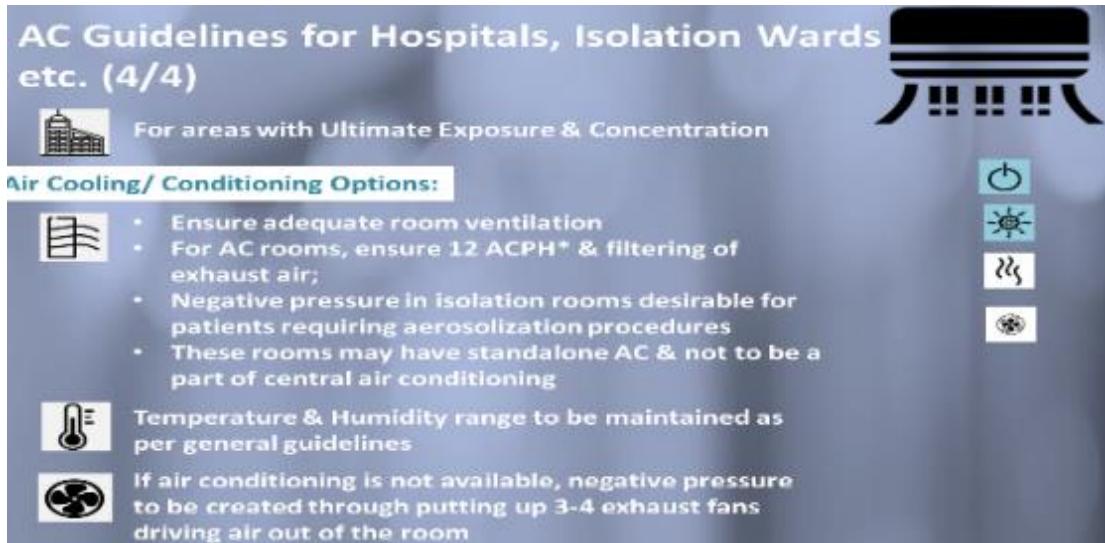


Figure 60: AC Guidelines for Hospitals, Isolation Wards etc

6.10 Others

6.10.1 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>

6.10.2 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>

6.10.3 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' - Details of COVID-19 Cases Worldwide

(Details as on 5 Oct 2020)

Reporting Country/Territory/Area	Cumulative cases	Cumulative deaths	Cumulative deaths per 1 million population
Africa	1198550	26264	4
South Africa	679 716	16 938	286
Ethiopia	76 988	1 207	10
Mozambique	9 049	64	2
Uganda	8 491	79	2
Nigeria	59 287	1 113	5
Algeria	51 995	1 756	40
Kenya	38 923	725	13
Angola	5 370	189	6
Namibia	11 572	123	48
Cabo Verde	6 296	62	112
Ghana	46 768	301	10
Madagascar	16 529	232	8
Botswana	3 172	16	7
Côte D'Ivoire	19 793	120	5
Zambia	14 830	333	18
Guinea	10 735	66	5
Senegal	15 051	312	19
Burkina Faso	2 088	58	3
Democratic Republic of The Congo	10 751	274	3
Eswatini	5 530	111	96
Togo	1 840	48	6
Cameroon	20 838	418	16
Mali	3 170	131	6
Congo	5 089	89	16
Lesotho	1 639	38	18
Gabon	8 797	54	24
Zimbabwe	7 858	228	15
Sierra Leone	2 259	72	9
Mauritania	7 511	161	35
Rwanda	4 852	29	2
South Sudan	2 726	50	4
Central African Republic	4 845	62	13

Guinea-Bissau	2 362	39	20
Chad	1 211	85	5
Benin	2 357	41	3
Burundi	513	1	<1
Gambia	3 590	115	48
Eritrea	398	0	<1
Equatorial Guinea	5 045	83	59
Malawi	5 783	179	9
Mauritius	381	10	8
Comoros	484	7	8
Liberia	1 347	82	16
Niger	1 200	69	3
Sao Tome and Principe	913	15	68
Seychelles	142	0	<1
United Republic of Tanzania	509	21	<1
Territories			
Réunion	4 178	16	18
Mayotte	3 779	42	154
Americas	16990036	568358	84
United States of America	7 256 234	207 366	626
Brazil	4 880	145 388	684
Argentina	779 689	20 599	456
Colombia	841 531	26 397	519
Mexico	753 090	78 492	609
Peru	821 564	32 609	989
Chile	468 471	12 919	676
Canada	162 659	9 409	249
Costa Rica	77 829	930	183
Ecuador	140 351	11 597	657
Venezuela (Bolivarian Republic of)	76 820	643	23
Paraguay	42 684	890	125
Panama	113 962	2 406	558
Honduras	78 269	2 386	241
Guatemala	93 748	3 285	183
Bolivia (Plurinational State of)	136 219	8 045	689
Dominican Republic	113 926	2 128	196
El Salvador	29 358	857	132
Jamaica	6 795	119	40
Bahamas	4 332	96	244
Trinidad and Tobago	4 709	78	56
Cuba	5 780	122	11
Belize	2 080	28	70
Guyana	2 968	85	108

Uruguay	2 097	48	14
Haiti	8 792	229	20
Suriname	4 899	105	179
Nicaragua	4 146	151	23
Antigua and Barbuda	106	3	31
Dominica	31	0	<1
Barbados	196	7	24
Grenada	24	0	<1
Saint Kitts and Nevis	19	0	<1
Saint Lucia	27	0	<1
Saint Vincent and the Grenadines	64	0	<1
Territories			
Puerto Rico	50 375	681	238
Guadeloupe	5 903	75	187
Martinique	1 543	21	56
Aruba	3 998	27	253
French Guiana	10 029	67	224
Curaçao	399	1	6
Sint Maarten	668	22	513
Bonaire Sint Eustatius and Saba	124	1	38
United States Virgin Islands	1 326	20	192
Saint Martin	412	8	207
Turks and Caicos Islands	695	6	155
Saint Barthélemy	62	0	<1
Cayman Islands	213	1	15
Anguilla	3	0	<1
Bermuda	181	9	145
British Virgin Islands	71	1	33
Falkland Islands (Malvinas)	13	0	<1
Montserrat	13	1	200
Saint Pierre and Miquelon	16	0	<1
Eastern Mediterranean	2466722	63156	9
Iraq	375 931	9 347	232
Iran (Islamic Republic of)	468 119	26 746	318
Morocco	131 228	2 293	62
Lebanon	43 480	398	58
United Arab Emirates	97 760	426	43
Jordan	14 749	88	9
Tunisia	20 944	276	23
Pakistan	314 616	6 513	29
Libya	36 087	578	84
Bahrain	72 310	258	152
Kuwait	106 458	620	145
Saudi Arabia	335 997	4 850	139

Oman	98 585	935	183
Qatar	126 339	216	75
Egypt	103 575	5 970	58
Syrian Arab Republic	4 329	204	12
Somalia	3 745	99	6
Afghanistan	39 341	1 462	38
Sudan	13 653	836	19
Yemen	2 045	590	20
Djibouti	5 418	61	62
Territories			
Occupied Palestinian territory	52 013	390	76
Europe	6187384	240148	35
France	580 703	31 969	490
Russian Federation	1 215 001	21 358	146
The United Kingdom	480 021	42 317	623
Spain	789 932	32 086	686
Israel	255 160	1 629	188
Ukraine	226 462	4 397	101
Netherlands	131 749	6 440	376
Czechia	80 605	711	66
Germany	299 237	9 529	114
Italy	322 751	35 968	595
Romania	134 065	4 947	257
Poland	98 140	2 604	69
Belgium	127 529	10 044	867
Turkey	323 014	8 384	99
Hungary	30 575	822	85
Republic of Moldova	55 888	1 353	335
Portugal	78 247	1 995	196
Austria	48 019	809	90
Slovakia	12 321	54	10
Uzbekistan	58 421	479	14
Ireland	37 668	1 810	367
Armenia	52 496	977	330
Denmark	29 302	654	113
Georgia	8 118	50	13
Belarus	79 852	851	90
Switzerland	54 263	1 783	206
Greece	2 385	405	39
Sweden	94 283	5 895	584
Bulgaria	21 518	841	121
Montenegro	12 083	174	277
Bosnia and Herzegovina	28 234	870	265
Croatia	17 401	293	71

North Macedonia	18 602	753	361
Kazakhstan	141 484	2 075	111
Kyrgyzstan	47 428	1 066	163
Slovenia	6 330	140	67
Albania	14 117	392	136
Lithuania	5 081	94	35
Norway	14 149	275	51
Finland	10 244	345	62
Azerbaijan	40 561	595	59
Serbia	33 842	753	108
Estonia	3 577	67	51
Luxembourg	8 709	125	200
Latvia	2 019	38	20
Tajikistan	9 895	77	8
Andorra	2 110	53	686
Iceland	2 872	10	29
Malta	3 139	37	84
Cyprus	1 811	22	18
Monaco	222	1	25
Liechtenstein	123	1	26
San Marino	750	42	1 238
Holy See	12	0	<1
Territories			
Kosovo[1]	15 715	620 333	
Faroe Islands	473	0	<1
Gibraltar	416	0	<1
Jersey	421	32	294
Guernsey	256	13	206
Isle of Man	341	24	282
Greenland	14	0	<1
South-East Asia	7335273	119167	21
India	6 549 373	101 782	74
Indonesia	299 506	11 055	40
Nepal	84 570	528	18
Bangladesh	367 565	5 325	32
Myanmar	16 503	371	7
Maldives	10 465	34	63
Thailand	3 585	59	1
Sri Lanka	3 395	13	1
Bhutan	283	0	<1
Timor-Leste	28	0	<1
Western Pacific	625642	13632	2
Philippines	319 330	5 678	52
Japan	85 339	1 597	13

Malaysia	12 088	137	4
Republic of Korea	24 091	421	8
China	91 121	4 746	3
Singapore	57 800	27	5
Australia	27 121	893	35
Viet Nam	1 096	35	<1
New Zealand	1 498	25	5
Papua New Guinea	540	7	1
Cambodia	278	0	<1
Solomon Islands	1	0	<1
Brunei Darussalam	146	3	7
Fiji	32	2	2
Lao People'S Democratic Republic	23	0	<1
Mongolia	313	0	<1
Territories			
French Polynesia	2 026	8	28
Guam	2 699	51	302
Northern Mariana Islands (Commonwealth of The)	73	2	35
New Caledonia	27	0	<1
Subtotal for all regions	34 803 607	1 030 725	-
Other	741	13	
Grand Total	34 804 348	1 030 738	132

Figure 61: Details of COVID-19 Cases Worldwide

Annexure 'II'- 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 details of the timing of schedule of the flights can be accessed from the links given below: -

- I. For evacuation flight schedule phase 6 (01 Sep 20 - 28 Mar 21) Sheet B
<http://www.airindia.in/images/pdf/VBM-Phase-6-Sheet-B-Air-Bubble-flights.pdf>
- II. Vande Matram Bharat Mission fare sheet
 - Fares to/from USA/Canada: -
<http://www.airindia.in/images/pdf/VBM-fares-USA-CANADA-converted.pdf>
 - Fares to/from UK/France/Germany: -
<http://www.airindia.in/images/pdf/UK-GERMANY-FRANCE-AIR-BUBBLE-FARES-converted.pdf>
 - Fares to/from Gulf/Africa: -
<http://www.airindia.in/images/pdf/VBM-FARES-Gulf-and-Africa-routesVER-20-DATED-26sep2020-converted.pdf>
 - Fares to/from Other countries: -
<http://www.airindia.in/images/pdf/EVACUATION-FARES-DATED-29th-SEPTEMBER-2020.pdf>

Annexure 'III' - Important Websites & Twitter Handles

Websites

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

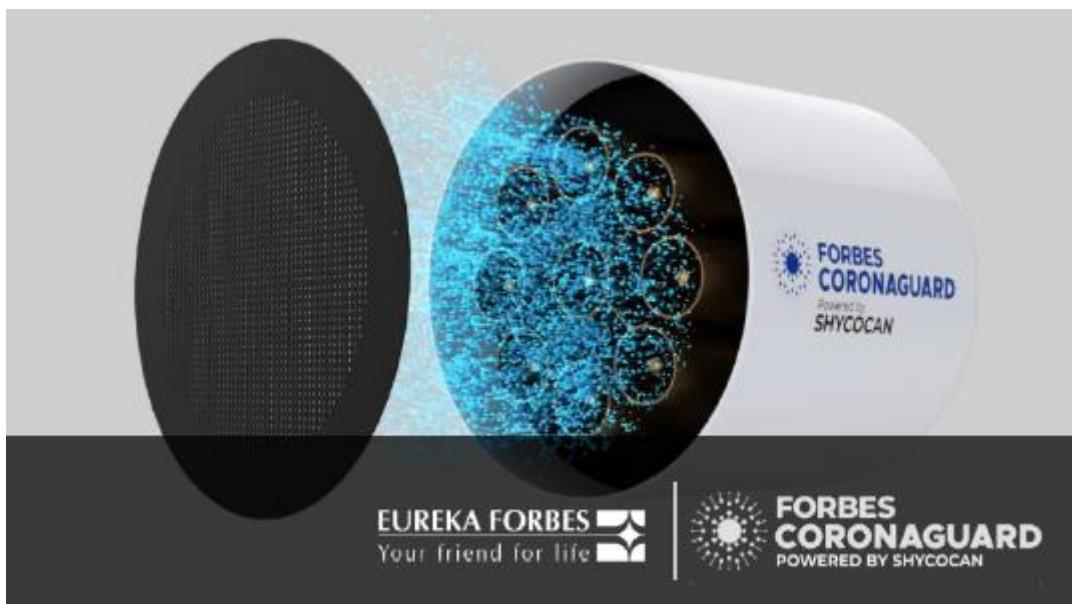


Figure 62: Eureka Forbes CORONA GUARD

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 Immunologicas 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 63: Technical Specifications of Forbes CORONA GUARD

Annexure 'V'- 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 ‘VI’- 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 64: 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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