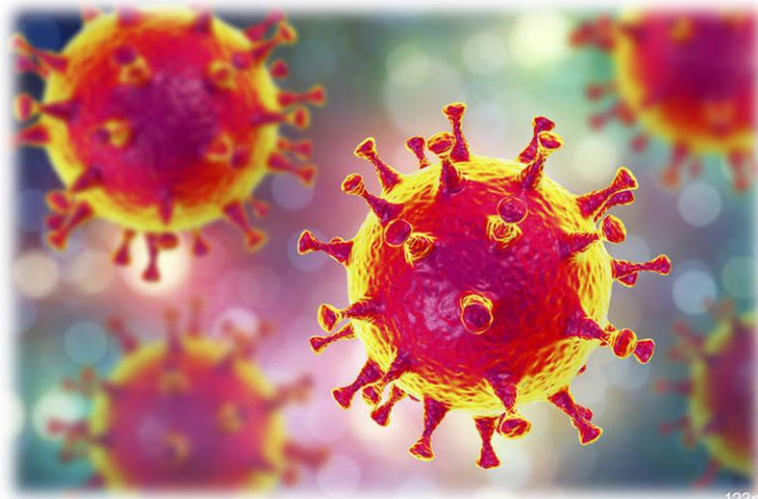


# **CORONAVIRUS DISEASE (COVID-19)**

## **PREPARE, DON'T PANIC!**

**A Strategic Approach towards prevention and management of Coronavirus**



**By: Dr. Apeksha Wasudeo**



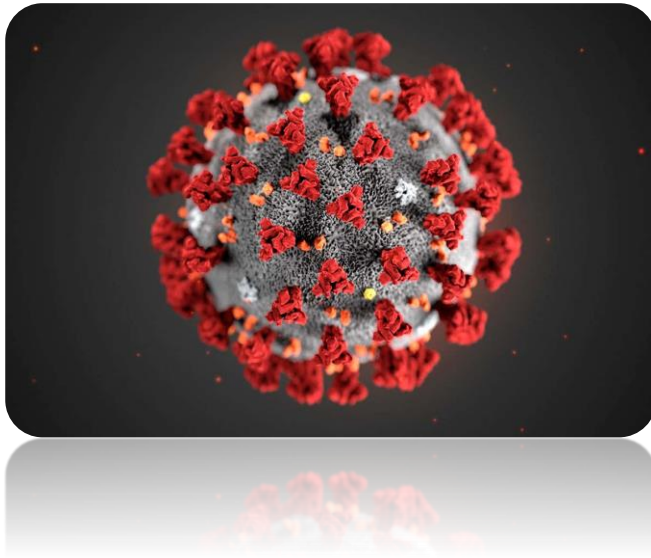
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## 1. OVERVIEW OF CORONAVIRUS DISEASE

Pandemic has hit the world crossing various stages since the inception of that spillover event when the sticky protein spikes on the outside walls of the corona virus got the ability to penetrate human cells (acting as host), eventually cracking it open to enter and cause the Covid-19 disease showing symptoms of dry **cough**, **sore throat**, **temperature**, **shortness of breath** etc.

Ever since, there has been **human to human transmission** at an alarming rate after the single introduction into the human population. This viral replication inside a human body could be combated by healthy immune system or it leads to **pulmonary destruction**.



Coronavirus disease (COVID-19) is an infectious disease caused by a new virus.

The disease causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing. You can protect yourself by washing your hands frequently, avoiding touching your face, and avoiding close contact (1 meter or 3 feet) with people who are unwell.

## 2. STAGES OF COVID-19

### Stage 1: Containment

A person getting infected after having travelled from an infected country. If he self-isolates himself for 14 days, one can either detect the Covid-19 symptoms in him and get him treated or his strong immunity does not allow him to get impacted by the virus.

E.g. A person 'X' travels from Germany to India. He gets infected by corona virus, self-isolates him and discovers that he has Covid-19 but his quarantine helps in not spreading the virus among vulnerable people.

### Stage 2: Community Transmission

A person suffering from Covid-19 meets few people in his community and spreads virus among them. It is possible to trace back all the cases and get them tested for Covid-19 detection.

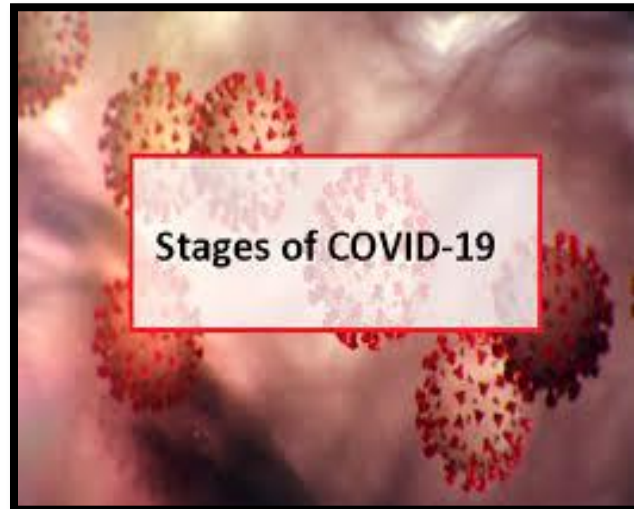
E.g. A person 'Y' is infected and is unaware of the symptoms, goes and meets people in his circle without knowing that he is the carrier of the disease. Some vulnerable people comes in his

contact and are infected and diagnosed with Covid-19. It is still manageable stage wherein people can be traced back and quarantined to prevent it from spreading.

### Stage 3: Herd Immunity

This is secondary level of infection wherein a person is unaware of the fact that he is infected with Covid-19. He travels at his own will at various places without knowing that he is spreading virus among more and more people surrounding him.

E.g. A person 'Z' who has never visited a foreign infected country, also having no immediate carrier-contact in his community goes out to a grocery store to buy vegetables. He meets one of his infected friends who contracts Covid-19 into him. Now, this person 'Z' does not realize it and goes about in his daily lives rather than staying isolated. In such a case, more and more cases shall be reported on daily basis as the virus transmits from person to person out in the community. The spread of virus outpaces the government's ability to keep track of contact tracing and treat patients in hospitals accordingly.



### Stage 4: Pandemic

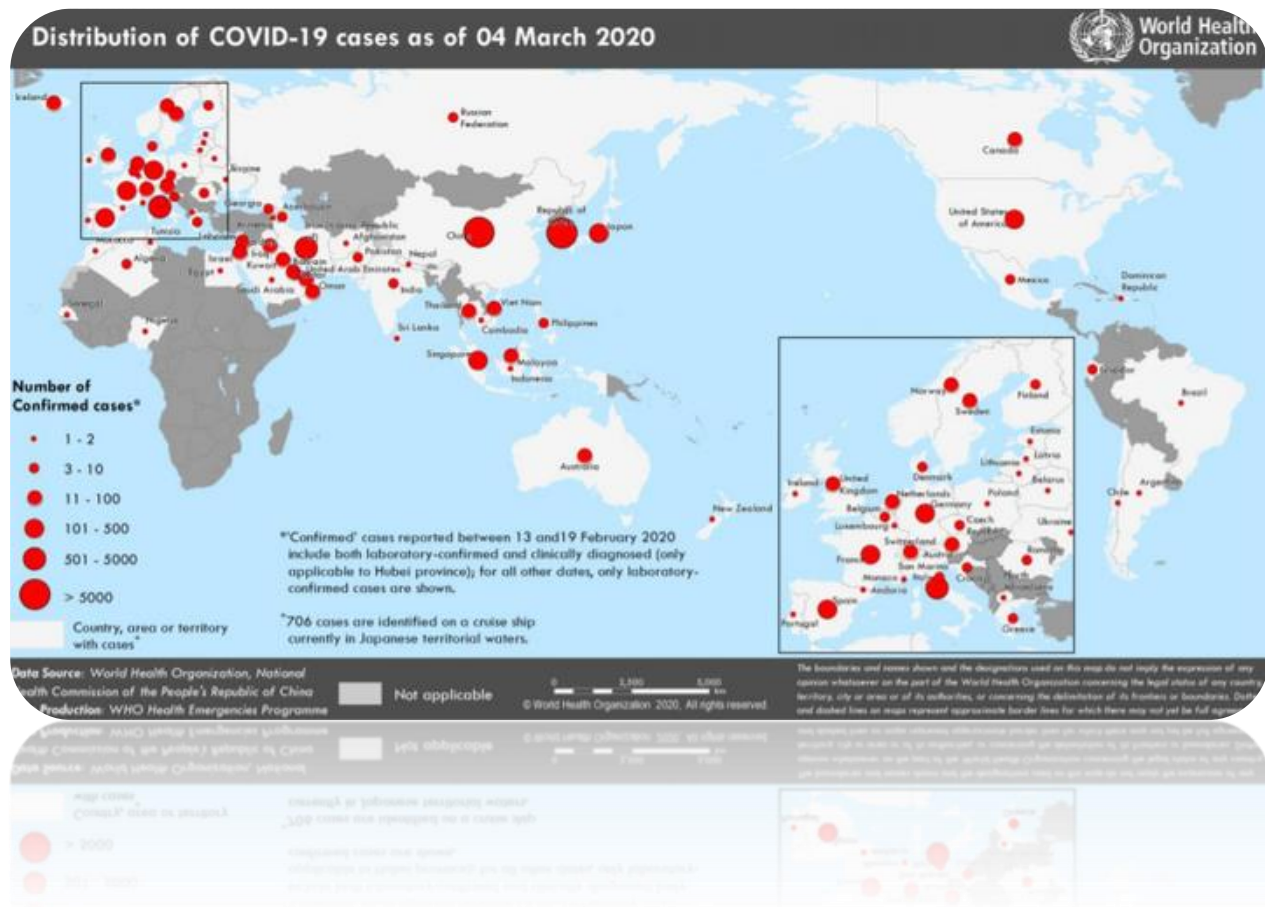
The exponential multiplicative effect of the virus among humans makes the situation far worse when the numbers rise quickly & highly with limited no of facilities available in the hospital such as ventilators, isolation beds, testing kits for naso-pharyngeal swabs etc. Such an outbreak would be difficult to control and evolves into a major pandemic.

## 3. SPREAD OF THE DISEASE

Coronavirus disease spreads primarily through contact with an infected person when they cough or sneeze. It also spreads when a person touches a surface or object that has the virus on it, then touches their eyes, nose, or mouth.

### **Which group of people are at higher risk of getting infected?**

- People who have **travelled to other countries** in last 14 days and their family members.
- People coming from other states if they have been working with people who travelled to other countries in last 14 days.
- **Family members** and contacts of patients confirmed to have COVID-19.
- People **older than 60 years** of age and people with **medical problems** like high blood pressure, heart problems, respiratory disease/asthma, cancer or diabetes are at higher risk for developing serious complications.



#### 4. BIOLOGY AND PATHOPHYSIOLOGY OF THE DISEASE

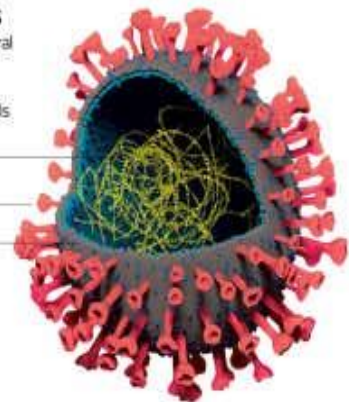
COVID-19 is a non-segmented, positive sense RNA virus.

- COVID-19 is part of the family of coronaviruses. This contains:
  - (i) Four coronaviruses which are *widely* distributed and usually cause the common cold (but *can* cause viral pneumonia in patients with comorbidities).
  - (ii) SARS and MERS – these caused epidemics with high mortality which are somewhat similar to COVID-19. COVID-19 is most closely related to SARS.
- It binds via the angiotensin-converting enzyme 2 (ACE2) receptor located on type II alveolar cells and intestinal epithelia.
  - This is the *same* receptor as used by SARS (hence the technical name for the COVID-19, “SARS-CoV-2”).
  - When considering possible therapies, SARS (a.k.a. “SARS-CoV-1”) is the most closely related virus to COVID-19.

##### Anatomy of a virus

The covid-19 virus has several features we may be able to target with drugs to break it down and stop it entering cells

RNA enclosed in protein  
Spike protein  
Lipid membranes



- COVID-19 is mutating, which may complicate matters even further. Virulence and transmission will shift over times, in ways which we cannot predict

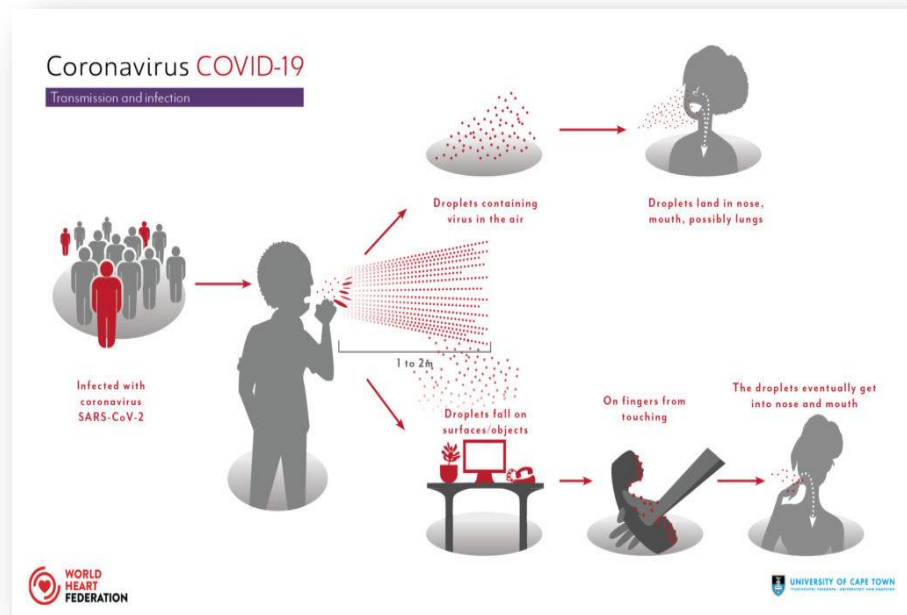
## Pathophysiology

- ARDS
  - The primary pathology is ARDS, characterized by diffuse alveolar damage (e.g. including hyaline membranes). Pneumocytes with viral cytopathic effect are seen, implying *direct* virus damage (rather than a purely hyper-inflammatory injury).
- Cytokine storm
  - Emerging evidence suggests that some patients may respond to COVID-19 with an exuberant “cytokine storm” reaction (with features of bacterial sepsis or hemophagocytic lymphohistiocytosis).
  - Clinical markers of this may include elevations of C-reactive protein and ferritin, which appear to track with disease severity and mortality.

## 5. TRANSMISSION OF THE DISEASE

### Large droplet transmission

- COVID-19 transmission can occur via *large* droplet transmission (with a risk limited to ~6 feet from the patient)
- This is typical for respiratory viruses such as influenza.
- Transmission via large droplet transmission can be prevented by using a standard surgical-style mask.



### Airborne transmission

- It's controversial whether COVID19 can be transmitted via an airborne route (small particles which remain aloft in the air for longer periods of time). Airborne transmission would imply the need for N95 masks, rather than surgical masks.
- The type of personal protective equipment used will vary depending on availability.
- **Negative pressure rooms** are ideal, but will generally be exhausted early. When negative pressure rooms aren't available, portable **HEPA filters** can be used

## Contact transmission (“fomite-to-face”)

This mode of transmission has a tendency to get overlooked, but it may be incredibly important. This is how it works:

- Someone with coronavirus coughs, emitting large droplets containing the virus. Droplets settle on surfaces in the room, creating a thin film of coronavirus. The virus may be shed in nasal secretions as well, which could be transmitted to the environment.
- The virus persists on fomites in the environment. Depending on the type of surface, virus may persist for roughly four days
- Someone else touches the contaminated the surface hours or days later, transferring the virus to their hands.
- If the hands touch a mucous membrane (eyes, nose, or mouth), this may transmit the infection.

Any effort to limit spread of the virus must block contact transmission. The above chain of events can be disrupted in a variety of ways:

- Regular cleaning of environmental surfaces (e.g. using 70% ethanol or 0.5% sodium hypochlorite solutions).
- Hand hygiene (high concentration ethanol neutralizes the virus and is easy to perform, so this might be preferable if hands aren't visibly soiled).
- Avoidance of touching your face. This is nearly impossible, as we unconsciously touch our faces constantly. The main benefit of wearing a surgical mask could be that the mask acts as a physical barrier to prevent touching the mouth or nose.

Any medical equipment could become contaminated with COVID-19 and potentially transfer virus to providers. A recent study found widespread deposition of COVID-19 in one patient's room, but fortunately this seems to be removable by cleaning with sodium dichloroisocyanurate

## When can transmission occur?

**Asymptomatic transmission** (in people with no or minimal symptoms) appears to be possible.

Transmission appears to occur over roughly ~8 days following the initiation of illness.

Patients may continue to have positive pharyngeal PCR for weeks after convalescence. However, virus culture methods are unable to recover viable virus after ~8 days of clinical illness. This implies that prolonged PCR positivity probably *doesn't* correlate with clinical virus transmission



## 6. PERSONAL PROTECTIVE EQUIPMENT (PPE)

### Gear

**Contact precautions** (waterproof gown and gloves)

#### Some sort of mask

- N95 mask or a powered, air-purifying respiratory (“PAPR”)
- Surgical mask for patients not undergoing aerosol-generating procedures (based on WHO & Canadian guidelines).
- An anesthesia mask might be placed in-line with a viral filter to MacGyver an N95 mask. The main drawback is that the mask itself could become a giant fomite which is contaminated with COVID-19 (so carefully washing the entire mask in between uses).

**Goggles** or eye shield.

**Hair cover** for aerosol generating procedures.

**Hood** may be used, especially during intubations

**Shoes** that are easily cleaned and don't need to be touched might be preferable (e.g. Danskos).

**Note:** *The exact gear used is probably less important than using it correctly.*

### Applying and removing PPE (donning & doffing):

- Understanding how to put on (don) and remove (doff) personal protective equipment is extremely important (especially if contact transmission is a dominant mode of transmission).
- Removing soiled PPE is the most critical and difficult aspect.
- Applying and removing PPE should ideally be practiced before patients arrive (e.g. using simulation).





## Some pearls about personal protective equipment

- Pay attention to the junction between gloves and gowns. The gown should be tucked into the gloves (leaving no gap in-between). Using gloves with extended cuffs facilitates this (similar to sterile surgical gloves). Gloves with long cuffs may facilitate removal of the gown and gloves as a single unit
- When removing PPE, always start by first applying alcohol-based hand sanitizer to your gloves.
- After fully removing PPE, sanitize hands and wrists with alcohol-based hand sanitizer again.

## 7.SIGNS AND SYMPTOMS

COVID-19 may cause constitutional symptoms, upper respiratory symptoms, lower respiratory symptoms, and, less commonly, gastrointestinal symptoms. Most patients will present with constitutional symptoms and lower respiratory symptoms (e.g. fever and cough).

### Fever:

The best available data suggests that only about half of patients are febrile at the time of admission.

Absence of a fever does not exclude COVID-19.

**COVID-19**  
Disease caused by the SARS-CoV-2 virus

**Novel coronavirus**  
Coronaviruses are viruses that circulate among animals but some of them are also known to affect humans. The 2019 novel coronavirus was identified in China at the end of 2019 and is a new strain that has not previously been seen in humans.

**Symptoms**

- FEVER
- COUGH
- DIFFICULTY BREATHING
- MUSCLE PAIN
- TIREDNES

**Prevention**

When visiting affected areas

- Avoid contact with sick people
- Wash your hands with soap and water
- If you develop cough, use a medical face mask

Wherever you travel apply general hygiene rules

**Transmission**  
VIA RESPIRATORY DROPLETS  
2-14 days estimated incubation period

ecdc.europa.eu/en/novel-coronavirus-china

### Gastrointestinal presentations:

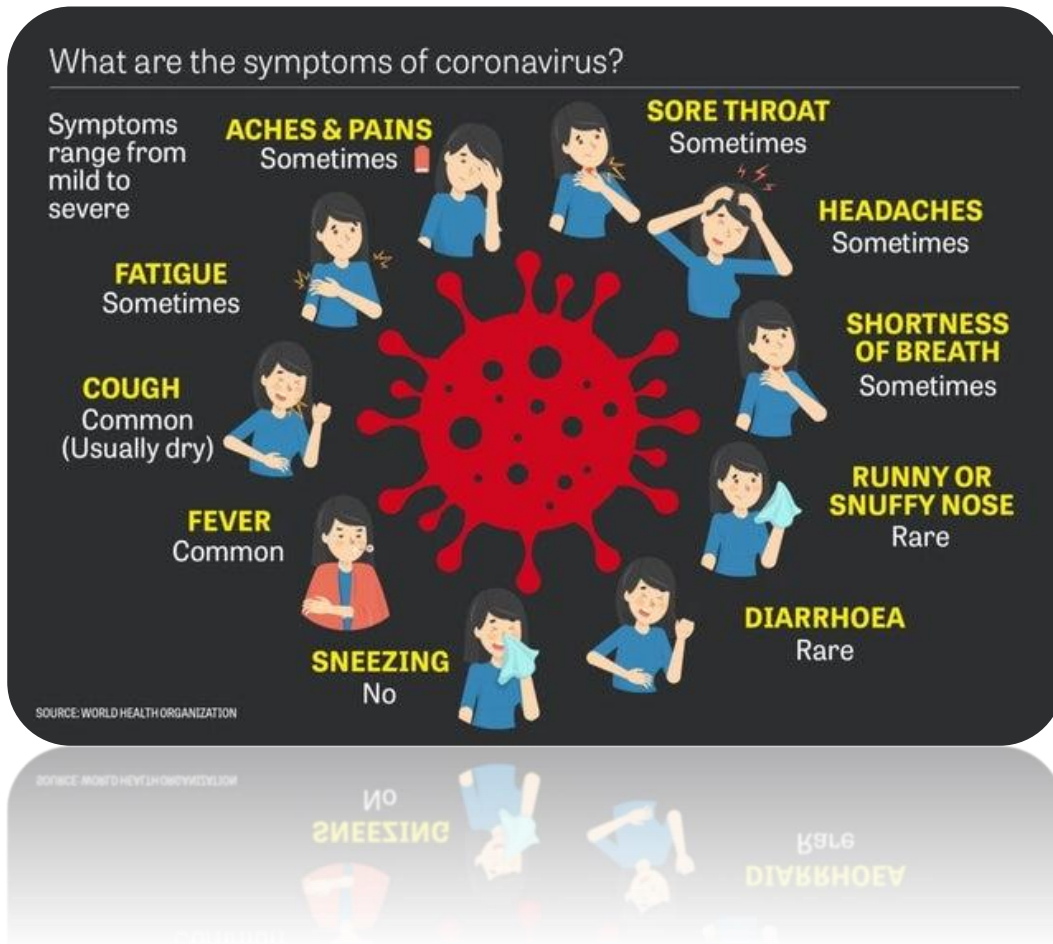
Up to 10% of patients can present initially with gastrointestinal symptoms (e.g. diarrhea, nausea), which precede the development of fever and dyspnea.

Note that some patients may present with gastrointestinal symptoms. Unfortunately, most diagnostic algorithms will fail to detect and isolate these patients.

### “Silent hypoxemia”

Some patients may develop hypoxemia and respiratory failure without dyspnea (especially elderly)

- Physical examination is generally nonspecific. About 2% of patients may have pharyngitis or tonsil enlargement.



**Typical disease course:**

**Incubation** is a median of ~4 days (interquartile range of 2-7 days), with a range up to 14 days. Rare patients may have a longer incubation.

**Typical evolution of severe disease**

- Dyspnea ~ 6 days post exposure.
- Admission after ~8 days post exposure.
- ICU admission/intubation after ~10 days post exposure. However, this timing may be variable (some patients are stable for several days after admission, but subsequently deteriorate rapidly).

People may be sick with the virus for 1 to 14 days before developing symptoms. The most common symptoms of coronavirus disease (COVID-19) **are fever, tiredness, and dry cough.** Most people (about 80%) recover from the disease without needing special treatment.

More rarely, the disease can be serious and even fatal. Older people, and people with other medical conditions (such as asthma, diabetes, or heart disease), may be more vulnerable to becoming severely ill.

## 8.SPECIFIC TESTING FOR COVID-19

### Specimens:

**Nasopharyngeal swab** should be sent.

If intubated, tracheal aspirate should be performed.

**Bronchoalveolar lavage** or induced sputum are other options for a patient who isn't intubated. However, obtaining these specimens may pose substantial risk of transmission.

**Preventive care** in health facilities.



## 9.PREVENTION OF THE DISEASE

A person is less likely to catch an infection of Covid-19 unless and until he touches his hands on his face, eyes or nose after having contacted an infected person or inhales the cough droplets of an infected person by virtue of being in close proximity with the latter. Thus one must wash hands quite regularly and maintain a good respiratory hygiene. Mostly less immune people such as older persons and the ones with pre-medical conditions such as high blood pressure, heart disease, lung disease, cancer or diabetes must take extra care.

### NOVEL CORONAVIRUS (COVID-19)









When to wear a Mask?

**Everyone NEED NOT WEAR a mask!**

Only wear a mask if

- You have symptoms (Cough, fever or difficulty in breathing)
- You are caring for a COVID-19 suspect/confirmed patient
- You are a health-worker attending to patients with respiratory symptoms

While wearing a mask, make sure you:

 Unfold the pleats of the mask; make sure that they are facing down.	 Place the mask over your nose, mouth and chin and ensure there are no gaps on either side of the mask, adjust to fit.	 Avoid touching the mask, while using it.	 Do not leave the mask hanging from the neck.
 Change the mask after six hours or as soon as they become wet.	 Never reuse disposable masks and dispose the used masks into closed bins after disinfecting them.	 Do not touch the potentially contaminated outer surface of the mask, while removing it.	 After removal of mask, clean your hands with soap and water or use alcohol-based hand rub disinfectant.

**Together we can fight COVID-19!**

Wearing masks has become a recent trend but mind you, the masks should be wore by only those who have Covid-19 and not by all. It would only be wasting a mask if a non-infected person wears it. One must know that the incubation period is the time between catching the infection and beginning to show symptoms of the disease. Covid-19 incubation period ranges from 1-14 days.

There's currently no vaccine to prevent coronavirus disease (COVID-19).

You can protect yourself and help prevent spreading the virus to others if you:

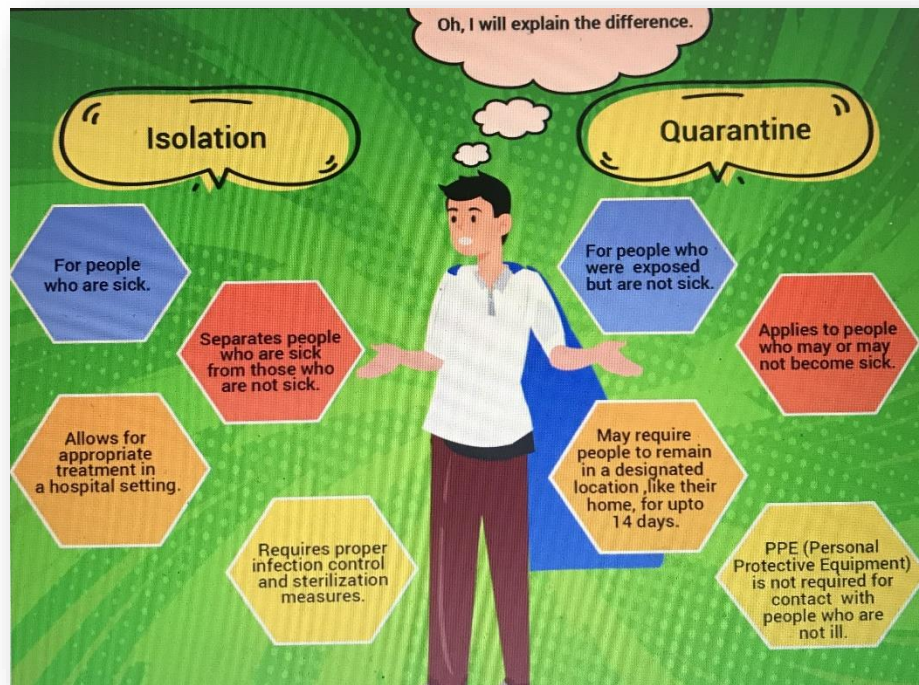
**Do**

Wash your hands regularly for 20 seconds, with soap and water or alcohol-based hand rub

Cover your nose and mouth with a disposable tissue or flexed elbow when you cough or sneeze

Avoid close contact (1 meter or 3 feet) with people who are unwell






Stay home and self-isolate from others in the household if you feel unwell



**Don't**

Touch your eyes, nose, or mouth if your hands are not clean

**Preventive measures for FLU + COVID-19**

 <p><b>Washing your hands is the best protection:</b></p> <p><b>Wash often</b></p> <ul style="list-style-type: none"> <li>- Use soap and water</li> <li>- Wash for at least 20 seconds</li> </ul> <p><b>Use hand sanitizer</b></p> <ul style="list-style-type: none"> <li>- Alcohol-based</li> <li>- When washing is not an option</li> </ul>	 <p><b>Avoid close contact:</b></p> <p>With people who are sick or may appear under the weather</p> <p>Stay home when you are sick. Do not expose others.</p>	 <p><b>Face masks:</b></p> <p>Those showing symptoms of these diseases should wear a mask to help prevent the spread of the disease.</p> <p><b>Wearing a mask is not recommended</b> for those who are well. It will not protect you.</p>	 <p><b>Cover your cough or sneeze:</b></p> <ul style="list-style-type: none"> <li>- Use a tissue then</li> <li>- Wash your hands</li> </ul> <p><b>Into your elbow</b></p> <ul style="list-style-type: none"> <li>- When a tissue is not available</li> </ul>	 <p><b>Clean and disinfect often:</b></p> <p>With a household cleaning product, wipe</p> <ul style="list-style-type: none"> <li>- Frequently touched objects</li> <li>- Regularly used surfaces</li> </ul>
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**STEPS :**

Step 1: Wet hands with warm water.

Step 2: Apply soap.

Step 3: Wash hands for at least 20 seconds (including your palms, back of each hand, between fingers, thumbs and under nails).

Step 4: Rinse well.

Step 5: Dry hands well with paper towel.

Step 6: Turn off tap using paper towel.

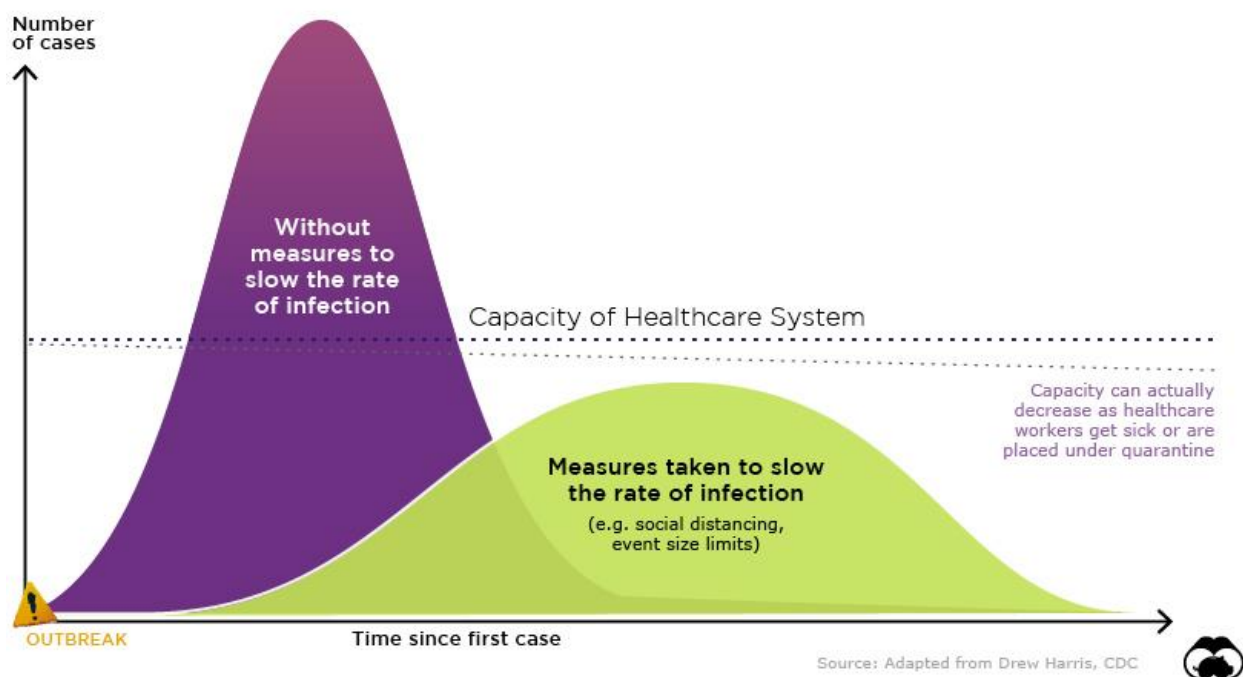
**10.STATISTICS DATED 26<sup>TH</sup> MARCH 2020**

Country	Population	Density	% increase in Covid-19 Cases in first 2 weeks from inception	Stage-3 Inking
The US	33.1 Crore	34 per Km <sup>2</sup>	353 %	126020 %
The UK	6.7 crore	281 per Km <sup>2</sup>	155 %	50586 %
China	140.8 Crore	150 per Km <sup>2</sup>	4806 %	190 %
France	6.52 Crore	119 per Km <sup>2</sup>	733 %	29055 %
Germany	8.3 Crore	234 per Km <sup>2</sup>	394 %	59866 %
Italy	6 Crore	200 per Km <sup>2</sup>	37500 %	7044 %
Spain	4.6 Crore	92 per Km <sup>2</sup>	2800 %	110346 %
Iran	8.3 Crore	48 per Km <sup>2</sup>	146000 %	1006 %
South Korea	5.1 Crore	511 per Km <sup>2</sup>	11150 %	196 %
India	138.7 Crore	464 per Km <sup>2</sup>	0 %	28666 %

The data clearly states that the virus seeped in through people in first 2 weeks causing stage-1 and stage-2 infections. Also, there is an upward trend in Covid-19 cases across world (except China & South Korea) entering into Stage-3 eventually leading to horrendous pandemic situation.

Most of the countries see an upsurge in Covid-19 cases which is not even positively correlated to the population density as we can see the highest percentage of cases in the US which has least no. of people per square kilometer. One can draw the conclusive evidence that social distancing and government involvement play a very important role in discouraging the spread of Covid-19 cases to Stage-3. **China & South Korea** could contain the cases due to stringent measures and better health-care facilities to its citizens.

### Flattening the COVID-19 Case Curve



Even the rate of **percentage increase** in Covid-19 cases declined in Iran as the government took actions such as Cancellation of public events and Friday prayers, closure of schools, universities, shopping centers and bazaars as well as holy shrines, and banning of festival celebrations.

Though absolute No. of Covid-9 cases in India seems less given the population but the percentage increase in the no. of cases looks huge. One can safely assume that not many people are tested given lack of proper infrastructure & health-care facilities in India. Thus the major lock-down has been announced by the Indian government for 21 days.

## 11. STEPS TAKEN BY THE GOVERNMENT

As government of India has announced a complete quarantine, it aims at reducing the chances of the country to enter into Stage-3 leading to “**flattening of the curve**” i.e. keeping the no. of

cases reported as low as one can. A step like this would equip our hospitals to treat everyone who needs to be treated from Covid-19 as proper load-balancing can be achieved.

- **A package of INR 1.7 lac Crore** is announced under **Pradhan Mantri Gareeb Kalyan Scheme**
- **Insurance of INR 50 lac** each for frontline workers such as paramedics, nurses, ASHA workers etc. fighting Covid-19 cases in India benefiting around 20 lakh people.
- Around 80 Crore people, i.e. two-third of India's population shall get 5 kgs of Wheat/ Rice and 1 kg pulses free for 3 months. This move is higher than guaranteed food under **National food security act (NFSA)** through public distribution system using ration card. During tough times, the government is leveraging on the excess of food grain stocks in our go-downs & food corporation of India which is presumably 178 % more than the required norm of reserve as on April 1st. Thus we can sustain for 2-4 months.
- Under **Pradhan Mantri Kisan Samman Nidhi Yojna**, the farmers shall get INR 6000 per year as Minimum income support which shall benefit around 8.69 Crore Indian farmers as the front loading of first installment shall be paid early.
- Under **MNREGA**, the daily pay-out has been increased from INR 182 to INR 202 since the announcement of lock-down which shall benefit around 13.62 Crore families but its unclear whether people shall be allowed to work or not.
- INR 1000 shall be transferred in banks of poor senior citizens, widows and the disabled in 2 installments over 3 months which shall benefit around 3 Crore people in India.
- 20 Crore Women **Jan-dhan Account holders** shall be credited with INR 500 per month for next 3 months to help them run the household.
- 1 LPG cylinder shall be given per month for 3 months under **Ujjwal Yojna**.
- Government has also decided to double **collateral-free loans** to INR 20 lac which shall benefit 7 crore households via 63 lakh women self-help groups.
- In organised sector, **Employee provident fund (EPF)** contribution of both Employee and Employer would be paid by the government for next 3 months for the Employees whose salary is less than INR 15k per month.
- The government is willing to amend the EPF regulation so as to enable the workers to draw up to 75% non-refundable advance from credit in PF account or 3 month salary, whichever is lower. This is expected to benefit families of 4 crore workers

## 12.ROLE OF FRONTLINE WORKERS IN PREVENTION AND MANAGEMENT OF DISEASE

India has also reported cases from states and the government is trying to contain the spread of the disease. As an important frontline worker, you play a major role in preventing its spread.

### Role as a Frontline Worker is two-fold:

- Spread key messages in the community about measures to prevent the infection.
- Take actions for early detection and referral of suspected COVID-19 cases.

### Key messages to spread for prevention of COVID-19:

How to avoid getting COVID-19 or spreading it?

**Practice Social Distancing:** Avoid gatherings such as melas, haats, gatherings in religious places, social functions etc. Maintain a safe distance of at least one Metre between you and other people when in public places, especially if they are having symptoms such as cough, fever etc. to avoid direct droplet contact. Stay at home as much as possible. Avoid physical contact like handshakes, hand holding or hugs. Avoid touching surfaces such as table tops, chairs, door handles etc.

**Practice good hygiene** Wash your hands frequently using soap and water:

- After coming home from outside or meeting other people especially if they are ill.
- After having touched your face, coughing or sneezing.
- Before preparing food, eating or feeding children.
- Before and after using toilet, cleaning etc.



While coughing or sneezing cover your nose and mouth with handkerchief. Wash the handkerchief at least daily It is preferable to cough/sneeze into your bent elbow rather than your palms

In public places to avoid the spread of droplets. Do not touch your eyes, nose and mouth with unclean hands. Ensure that the surfaces and objects are regularly cleaned

### **What to do if you are having symptoms or have travelled to other countries or states in past two weeks?**

Symptoms of COVID 19 and seasonal respiratory illness (common cold/flu) are similar. All people with these symptoms may not have COVID 19.

Following persons should be quarantined for 14 days at home as a precaution:

- People who have travelled to COVID 19 affected countries/areas in past 14 days
- Those who have come in close contact with a suspected/confirmed COVID-19 patient
- **Those who develop symptoms:** These persons should inform you. If symptoms become severe then the person should visit a health facility after speaking with you.

### **Your role in early detection and referral:**

As a community worker you may be asked to prepare a line list of all people who have travelled to other countries or other states inside India in last 14 days:

- Share their names with your Medical Officer at PHC but not with others.
- Teach them Home Quarantine for next 14 days



- Tell them to monitor themselves for symptoms of COVID-19.
- Tell them to inform you if symptoms develop and call the COVID 19 Helpline

#### **Instructions for the person being Home Quarantined:**

- Stay in a separate room at home, if possible with an attached/separate toilet.
- Try to maintain a distance of at least 1 meter from others Wear a mask at all times.
- If masks are not available, take a clean cotton cloth , fold it into a double layer and tie it on your face to cover your nose and mouth.
- Use separate dishes, towels, bedding etc. which should be cleaned separately.
- The surfaces such as floor, table tops, chairs,door handles etc. should be cleaned at least once a day Make sure that only one assigned family member is the caretaker

#### **Instructions for the caretaker of the Home Quarantined person:**

- Keep a distance of one metre when entering the room.
- Wear a mask or cover your face with double layered cotton cloth.
- Wash your hands after coming out of the room.

#### **How to use masks (or cloth covering the nose and mouth):**

- Wash your hands before putting on the mask.
- Make sure that it covers both mouth and nose and is not loose.
- Do not touch the mask from the front, touch only from the sides.
- Make sure to wash your hands after changing the mask.
- Change the mask every 6-8 hours or when it becomes moist.
- If using disposable masks, have a dustbin with cover and a plastic bag lining to throw the masks in.
- If using cloth masks, wash them at least daily

#### **How to take care of yourself and carry on with your duties as a frontline worker?**

- Carry your own soap if necessary If you are visiting or accompanying a suspected case to any health facility, make sure to cover both your mouth and nose with folded cloth or mask.
- If you are conducting community meetings or supporting outreach sessions the groups should not be larger than 10-12 people.
- Maintaining safe distances for those living in crowded areas or the homeless is going to be difficult. Even then you should inform them about preventive measures and support them as required.
- Self-monitor for signs of illness and report to the Medical Officer, immediately if any symptoms develop. Ensure that you continue to undertake tasks related to care of pregnant women,newborns and sick children,Post Natal Care, Breastfeeding and Nutritional Counselling, TB and NCD patient follow up while taking preventive measures.
- Remember older people are at higher risk, so take special care to visit homes of elderly people. Continue to pay special attention to the marginalized, as is your routine practice. Also as the people's trusted health worker, try to reassure them that while

those with symptoms and high risk need close attention, for others, prevention measures will decrease the risk of getting the disease.

## Myths vs. reality for COVID-19 As COVID-19 is a new condition, there are many common myths.

### Myths & Facts

MYTHS	FACTS
The corona virus can be transmitted through mosquitoes.	The corona virus CANNOT be transmitted through mosquito bites.
Everyone should wear a mask.	People who should wear a mask are: Those having symptom of fever, cough etc. Healthcare workers in facilities caring for ill people The assigned care taker of a home quarantined person Even those wearing masks should wash their hands frequently
Only people with symptoms of COVID-19 can spread the disease.	Even people with the COVID-19 infection but no symptoms can spread the disease.
Eating garlic and drinking alcohol can prevent COVID 19	Eating garlic and drinking alcohol DOES NOT prevent COVID 19

## 13.FREQUENTLY ASKED QUESTIONS(FAQs)

### What is the coronavirus (COVID-19) and why are people worried about it?

The disease is called COVID-19 (Coronavirus Infectious Disease 2019) and the virus that causes it is a type of virus called the coronavirus. It is so named because it bears a set of spikes that resembles a crown (“corona” means crown in Latin).

A number of viruses cause diseases in humans. These include diseases such as polio, measles, influenza (the “flu”) and the common cold. For some of these diseases, vaccines exist. Some of these vaccines, not all, are part of the immunisation schedule of injections you take when you are young. There is a vaccine for the flu which you can choose to take when older, but which needs to be taken every year to provide protection. These immunisations ensure that your immune system can recognise and fight the virus when it enters your body.

The problem comes when the body encounters a virus that it has simply not seen before. This is usually the case with viruses that circulate in animals or birds, for example, pigs, chickens and bats, under normal circumstances. Occasionally, these viruses can “spill-over” into humans, causing novel diseases. COVID-19 is one such disease. The virus for it is believed to have originated in bats.

People are worried about COVID-19 for a number of reasons. First, it is a respiratory disease that spreads easily from person to person. Second, for a small number of people infected with the disease, it can be fatal. Third, we have no natural immunity to it, there are no vaccines against it, and there are no medicines we can take for it, as of now.

### **What do we know about how the disease affects people and how does the infection spread?**

Most people have mild symptoms somewhat like those of the flu. Most often, these include a (high) fever, a dry cough and exhaustion. In some cases, body aches, shortness of breath, muscle and joint pain, sore throat, headache, chills and occasionally diarrhoea may also be present.

The disease appears to affect older people more than it does younger ones. Those aged between 0 and 9 are much less affected. The disease has a stronger effect in those with some pre-existing medical condition, such as diabetes, heart disease, lung disease or suppressed immunity. More serious consequences of the disease, which includes pneumonia, are seen in about 1 in 5 patients.

The disease spreads largely through droplets that are emitted when someone who is infected coughs or sneezes. These droplets can linger on surfaces and then reach your lungs when you touch these surfaces and then touch your mouth or face.

### **Is there anything I can do to prevent myself and others from getting it?**

Yes, indeed. The virus is transmitted through the respiratory route, i.e. through small droplets that are expelled when someone sneezes or coughs. These droplets can hang on to surfaces, such as the surface of someone's hand or doorknobs or rails i.e. anywhere where people tend to touch. From there, little droplets carrying the virus can be transferred to your mouth and lungs.

**The solution:** Wash your hands carefully to prevent the transfer of virus. If you wash the part of the tap you touch with soap and water before you wash your hands, you can open and close the tap at will to conserve water.

If you don't have water and soap, an alcohol-based sanitiser will do fine. Avoid touching your hands to your face as much as possible.

Apart from that, avoid crowds as the chances of physical contact with infected people may increase. Maintaining such a physical separation from other people is called "social distancing". A "safe" distance from people is usually considered to be between three and six feet. Avoid shaking hands. Use Indian greetings, such as a "Namaste" or an "Adab", to minimize physical contact.

### **Do I need to wear a mask every time I step out of the home?**

Wearing masks does more to protect others against the disease if you have it, rather than protect you from the disease if you come into contact with others who have it. More than that, high demand for masks from individuals deprives those who might need them more, such as

healthcare workers. So, if you suspect you have a respiratory ailment, do wear a mask. If you feel OK, don't.

### **What should I do if I have symptoms of cold/flu? Should I get myself tested and/or impose self-isolation?**

Because the symptoms of COVID-19 resemble those of a number of other common diseases (flu, cold etc.), you may well be infected with one of those instead. If you think you are ill, the first (and in most cases, best) thing to do is to 'self-quarantine' i.e. stay at home or in a place where you can reduce your interaction with people as much as possible to avoid spreading the infection. This should be done as rigorously as possible — there should ideally be no direct or even indirect physical contact between yourself and those who look after you and your caregivers should be careful on their own not to get infected.

It is also always good to practice respiratory hygiene i.e. cough into your elbow or into a tissue that you can safely dispose of. Also, wash your hands regularly and get those around you to do the same, take rest, drink lots of fluids, and eat fruits to bolster your immunity. If you have difficulty breathing, call up the hotlines that are available to seek advice. In general, do not go to see a doctor directly unless advised to, especially if your symptoms are mild. This is because you will encounter other people en route who you could potentially infect if you actually turn out to be ill.

If you have a cough and/or runny nose you should be wearing a mask to avoid infecting others. Otherwise, a mask is of no particular help.

### **I have heard that those suspected of having the illness are 'quarantined'. What does this mean and is this something to be afraid of?**

There are two types of quarantines.

In one, you will be confined in rooms that the government has arranged, just so that your contact with others who are not infected is severely reduced. This is in cases where you are considered to be at risk of having contracted the disease because you reached India from a place where the disease is known to have spread and also exhibited symptoms of having caught it yourself.

Otherwise, if you are just suspected of coming into contact with someone who later tested positive for the disease, you may be asked to 'self-quarantine'. This means that you will be required to stay at home or in any other place you can arrange where your access to other people can be properly limited.

Quarantine ensures that your physical contact with others is minimized. The health authorities will ensure that the state of your health is monitored and that you will be released from the quarantine requirement if you test negative at the end of the quarantine period, which is typically two weeks long.

There is no need to be afraid of quarantine. At most, being deprived of the sorts of physical and social contacts that we are used to experiencing can be a bit disorienting. But a well-designed quarantine facility will ensure that you can keep in contact with family and friends and in touch

with the goings-on in the outside world. It will ensure that you are provided nutritious food and other amenities so that your stay is comfortable.

The rules surrounding quarantining are being regularly evaluated, as the progress of the disease is monitored. The government may decide at a later stage to have more stringent rules for deciding who should be quarantined and who need not.

### **Can I get the infection from eating, say, meat, or by using products from China?**

No, not at all. First of all, this is a virus that is being transmitted between humans through a respiratory route; just any animal you might encounter won't harbour it. So eating meat has nothing to do with getting a coronavirus infection. Also, viruses such as this one don't last long on exposed surfaces and don't tolerate high temperatures very well. The delays in a package reaching from China to India will ensure that no virus will survive the journey to infect you. It is thus safe to use products from China without fear of infection.

### **Should schools and offices be closed because of the possibility of infection?**

Much depends on the stage of the epidemic. In the early stages and before the peak, when every effort is being made to contain it, closing schools is a useful strategy. But once the epidemic becomes widespread, the disruptions caused by such measures may not be worth it.

If, as the government assumes, we are in an early stage of the disease spread — a stage at which it is still possible to prevent it from spreading in the community — school and institutional closures will make sense. Such closures have been implemented in several Indian states by now.

However, whether schools and offices are closed or not, the concern should always be for elderly people or for those with some pre-existing health conditions, who have a higher chance of developing a more serious form of the disease. Every effort must be made to ensure that those with increased susceptibility to infection are protected as far as possible.

### **Is there a vaccine against it, or a medicine I can take if I get infected?**

No, not yet, although many laboratories around the world are working on this. There are a number of vaccine candidates that are being developed and a number of existing medicines for other diseases are being tested on COVID-19 patients to see if they will work. Making a safe vaccine available takes time, up to a year or two at best.

### **I hear that infection can be prevented using herbal extracts and Ayurvedic and homoeopathic medicines. Should I believe this?**

We know little about the effects of traditional medicines, although some people believe strongly enough in them. There is purely anecdotal evidence that they may work in some cases. Because health reflects the interaction of both body and mind, even strongly believing that a medicine might work — even if it actually doesn't — often helps the body deal better with the disease. This is called the placebo effect.

However, it is far better established that simple social distancing measures, respiratory hygiene and washing hands are very effective ways of preventing this and many other infections and of preventing their spread. As long as you practice such well-established methods of protecting yourself and others and do not substitute them with other untested or anecdotal methods, you should be fine. Also, boost your natural immunity by consuming fresh fruits and vegetables, get some sunlight when you can, and stay well hydrated. Reduce your stress levels as well, since stress lowers your body's natural ability to fight infections.

### **What is the government doing to contain the spread of COVID-19?**

The government is following the instructions of the WHO carefully and every level of public health machinery is aligned to it. The ministry of health is constantly updated about the numbers of cases and provides instructions to doctors and hospitals regarding the isolation and treatment of patients with the disease. The government has stopped the entry of people from countries affected by this disease by cancelling visas. Those who are suspected of having the disease are being tested. Quarantine facilities have been put into place in multiple locations. Ideally, a mechanism for testing anyone who suspects they have the disease should be put in place, but this is yet to happen.

Much will depend on how matters unfold in the near future. If there is what is called “community transmission” of the coronavirus, the numbers of those affected may become simply too large for the public health apparatus in India to cope with. It is for this reason that pursuing social distancing, tracking down cases, the use of self-quarantine and monitoring of those who might develop symptoms later is crucial at this point.

### **Is this infection going to stay or disappear? Will warmer weather help to contain the virus spread? Will it reappear once colder weather returns?**

This is particularly hard to predict. Some viral diseases (e.g. flu) are largely seasonal and tend to spread more easily in winters, rather than in the heat of the summer. We have no idea, as of now, whether COVID-19 will fall into this category. It could vanish altogether after the summer or — a perhaps more likely scenario — it could appear again in a second wave. We simply don't know yet.

### **Where can I go to obtain accurate, scientific, and up-to-date information about coronavirus?**

The websites of the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC) of the USA and the European CDC are all accurate sources of information. The web-pages of prominent newspapers and news organizations such as the New York Times and the BBC all carry trustworthy information. A number of Indian newspapers have carried accurate and well-researched reporting on the coronavirus and can be trusted. A good idea is always to go to the original source, typically the WHO or the Ministry of Health and Family Welfare which has current advisories.

### **How worried should I be, personally?**

If you are under the age of about 60 and with no pre-existing conditions, you might not even notice that you have been infected with COVID-19. If you are elderly or have a medical

condition that compromises your immunity, you should reduce close physical contact with others, even family members, for the time being, and monitor your health carefully.

Across all ages, however, you would be well-advised to follow the instructions regarding social distancing carefully, wash your hands regularly, stay away from those who might be reasonably suspected of having the disease until they are cured, and contact the COVID-19 hotline numbers if you suspect you may be ill with this disease.

## **14. REFERENCES**

<https://openwho.org>

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

<http://www.euro.who.int>