COVID-19 is an infectious disease caused by the recently found virus SARS-CoV-2 (or Corona Virus). Before the outbreak originated in Wuhan, China on December 2019, there was no information about this Virus. For this reason it is often called the Novel (new) Coronavirus. It has spread across the globe and 47 lakh 35 thousand 622 hundred (4,735,622) confirmed cases has been reported globally as on May19, 2020 according to World Health Organization.

Common symptoms of COVID-19 are:

- Fever
- Dry cough
- Breathing difficulty

Some patients also have aches and pains, nasal congestion, runny nose, sore throat or diarrhoea. Through several researches by Medical bodies/Institutions it is found that about 80% of confirmed cases recover from the disease without any serious complications. However, one out of every six people who gets COVID-19 can become seriously ill and develop difficulty in breathing. In more severe cases, infection can cause severe pneumonia and other complications which can be treated only at higher level facilities (District Hospitals and above). In a few cases it may even cause death.

How does COVID-19 spread?

COVID-19 spreads mainly by droplets produced as a result of coughing or sneezing of a COVID-19 infected person. As per the WHO, droplets of saliva or discharge from the nose from an infected person coughs or sneezes when land on objects and surfaces around the person infects the other person when they touch their eyes, nose or mouth after touching
these contaminated objects or surfaces. The incubation period of COVID-19 (time between getting the infection and showing symptoms) is 1 to 14 days. Many people infected with COVID-19 show mild symptoms, especially during the first stage of the disease can also spread the disease. It is therefore possible to catch COVID-19 from someone who has, for example, just a mild cough and does not feel ill. At this time, there are no specific vaccines or treatments for COVID-19. WHO is assessing ongoing research on the ways COVID-19 is spread. The organization put out a statement by Dr. Poonam Khetrapal Singh, Region Director, WHO South East Asia, on social media in which she said “airborne spread has not been reported for COVID-19”. “Based on the information received so far and on our experience with other coronaviruses, COVID-19 appears to spread mostly through respiratory droplets (for instance produced when a sick person coughs) and close contact. This is why WHO recommends maintaining hand and respiratory hygiene,” said Singh on March 23, 2020.

**DO's and Don’ts:**

To protect us, our family and our environment during the Pandemic of COVID-19 we have to follow few guidelines. Protection measures for everyone: You can reduce your chances of being infected or spreading COVID-19 by taking some simple precautions:

1. Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.
2. Maintain at least 1 meter distance between yourself and anyone who is coughing or sneezing. When someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease.
3. Avoid touching eyes, nose and mouth. Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and can make you sick.
4. Wear Face Mask if you are having cough and cold, going outside your house etc.
5. Do not Spit or shout in public places to avoid the spread of droplets
6. Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately. Droplets spread virus. By following good respiratory hygiene you protect the people around you from viruses such as cold, flu and COVID-19.
7. Stay home if you feel unwell. If you have a fever, cough and difficulty in breathing, seek medical attention and call in advance. Follow the directions of your local health authority. Health authorities will have the most up to date information on the situation in the area. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.
8. Avoid going to crowded places. Where people come together in crowds, you are more likely to come into close contact with someone that has COVID-19 and it is more difficult to maintain physical distance of 1 metre (3 feet).
9. Protection measures for persons who are in or have recently visited (past 14 days) areas where COVID-19 is spreading.
10. Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities. Local and national authorities are best placed to advise on what people in your area should be doing to protect themselves.

The Central Pollution Control Board, India’s pollution watchdog, released new guidelines for handling, treating and safe disposal of biomedical wastes that may be generated during treatment, diagnosis from quarantined patients confirmed or suspected to have novel coronavirus disease (COVID-19).

As per the guidelines all Healthcare Facilities having isolation wards for COVID-19 patients need to follow the following steps to ensure safe handling and disposal of biomedical waste generated during treatment:-

1) Keep separate color coded bins/bags/containers in wards and maintain proper segregation of waste as per BMWM Rules, 2016 as amended and CPCB guidelines for implementation of BMW Management Rules.
2) As precaution double layered bags (using 2 bags) should be used for collection of waste from COVID-19 isolation wards so as to ensure adequate strength and no-leaks;

3) Collect and store biomedical waste separately prior to handing over the same CBWTF. Use a dedicated collection bin labelled as “COVID-19” to store COVID-19 waste and keep separately in temporary storage room prior to handing over to authorized staff of CBWTF. Biomedical waste collected in such isolation wards can also be lifted directly from ward into CBWTF collection van.

4) In addition to mandatory labelling, bags/containers used for collecting biomedical waste from COVID-19 wards, should be labelled as “COVID-19 Waste”. This marking would enable CBWTFs to identify the waste easily for priority treatment and disposal immediately upon the receipt.

5) General waste not having contamination should be disposed as solid waste as per SWM Rules, 2016.

6) Maintain separate record of waste generated from COVID-19 isolation wards.

7) Use dedicated trolleys and collection bins in COVID-19 isolation wards. A label “COVID-19 Waste” to be pasted on these items also.

8) The (inner and outer) surface of containers/bins/trolleys used for storage of COVID-19 waste should be disinfected with 1% sodium hypochlorite solution daily.

9) Report opening or operation of COVID-19 ward and COVID ICU ward to SPCBs and respective CBWTF located in the area.

10) Depute dedicated sanitation workers separately for biomedical waste and general solid waste so that waste can be collected and transferred timely to temporary waste storage area.

11) Feces from COVID-19 confirmed patient, who is unable to use toilets and excreta is collected in diaper, must be treated as biomedical waste and should be placed in yellow bag/container. However, if a bedpan is used, then feces to be washed into toilet and cleaned with a neutral detergent and water, disinfected with a 0.5% chlorine solution, then rinsed with clean water.

12) Collect used PPEs such as goggles, face-shield, splash proof apron, Plastic Coverall, Hazmat suit, nitrile gloves into Red bag;

13) Collect used masks (including triple layer mask, N95 mask, etc.), head cover/cap, shoe-cover, disposable linen Gown, non-plastic or semi-plastic coverall in Yellow bags.

For Sample Collection Centers and Laboratories for COVID-19 suspected patients, guidelines given at the above section for isolation wards should be applied suitably in in case of test centers and laboratories. Pre-treat viral transport media, plastic vials, vacutainers, eppendorf tubes, plastic cryovials, pipette tips as per BMWM Rules, 2016 and collect in Red bags.
For the persons responsible for operating quarantine camps/centers/home-care for suspected COVID-19 persons need to follow the following steps to ensure safe handling and disposal of waste:-

1) General solid waste (household waste) generated from quarantine centers or camps should be handed over to waste collector identified by Urban Local Bodies or as per the prevailing local method of disposing general solid waste.

2) Biomedical waste if any generated from quarantine centers/camps should be collected separately in yellow colored bags (suitable for biomedical waste collection) provided by ULBs. These bags can be placed in separate and dedicated dust-bins of appropriate size.

3) Persons operating Quarantine camps/centers should call the CBWTF operator to collect biomedical waste as and when it gets generated. Contact details of CBWTFs would be available with Local Authorities.

4) Persons taking care of quarantine home / Home-care should deposit biomedical waste if any generated from suspected or recovered COVID-19 patients, by following any of the following methods as may be arranged by ULBs.

5) Hand over the yellow bags containing biomedical waste to authorized waste collectors at door steps engaged by local bodies.

6) Deposit biomedical waste in yellow bags at designated deposition Centers established by ULBs. The bag again be stored in yellow bag or container.

7) Handover the biomedical waste to waste collector engaged by CBWTF operator at the doorstep.

8) Persons operating Quarantine camps/centers or Quarantine-homes/Home-care should report to ULBs in case of any difficulty in getting the services for disposal of solid waste or biomedical waste.

As per the guidelines following are the duties of Common Biomedical Waste Treatment Facility (CBWTF):-


2) Operator of CBWTF shall ensure regular sanitization of workers involved in handling and collection of biomedical waste.

3) Workers shall be provided with adequate PPEs including three layer masks, splash proof aprons/gowns, nitrile gloves, gum boots and safety goggles.

4) Use dedicated vehicle to collect COVID-19 ward waste. It is not necessary to place separate label on such vehicles.

5) Vehicle should be sanitized with sodium hypochlorite or any appropriate chemical disinfectant after every trip.
6) COVID-19 waste should be disposed-off immediately upon receipt at facility. In case it is required to treat and dispose more quantity of biomedical waste generated from COVID-19 treatment, CBWTF may operate their facilities for extra hours, by giving information to SPCBs/PCCs.

7) Operator of CBWTF shall maintain separate record for collection, treatment and disposal of COVID-19 waste.

8) Do not allow any worker showing symptoms of illness to work at the facility. May provide adequate leave to such workers and by protecting their salary.

**Duties of SPCBs/PCCs as per the guidelines are as follows:-**

1) Shall maintain records of COVID-19 treatment wards / quarantine centers / quarantines homes in respective States.

2) Ensure proper collection and disposal of biomedical waste as per BMW Rules, 2016 and SoPS given in this guidance document.

3) Allow CBWTFs to operate for extra hours as per requirement.

4) May not insist on authorisation of quarantine camps as such facilities do not qualify as health facilities. However, may allow CBWTFs to collect biomedical waste as and when required.

5) In case of States not having CBWTFs as well as rural or remote areas, not having access to CBWTFs, the existing captive facilities of any hospital may be identified for disposal of COVID-19 waste as per provisions under BMWM Rules, 2016 and these guidelines. This may include permitting use of deep burial pits for disposal of yellow category waste as per standards prescribed in Schedule II of Bio-medical Waste Management Rules, 2016.

6) Coordinate with CBWTFs and ULBs in establishing adequate facilities for collection and disposal of COVID-19 waste.

7) In case of generation of large volume of yellow color coded (incinerable) COVID-19 waste, permit HW incinerators at existing TSDFs to incinerate the same by ensuring separate arrangement for handling and waste feeding.

**Duties of Urban Local Bodies (ULBs) as per the guidelines are:-**

1) Urban Local Bodies are responsible for ensuring safe collection and disposal of biomedical waste, if any, generated form Quarantine Camps/ Quarantine Homes/ Home Care for COVID-19 suspected persons.

2) Information on each Quarantine Camps/ Quarantine Homes/ Home-Care should be available with local administration and provide updated list to SPCBs from time to time.

3) In case of quarantine camps, ensure that biomedical waste is collected directly by CBWTFs identified by ULB. Waste from quarantine camps to be lifted by CBWTFs on
call basis as and when the biomedical waste gets generated. Provide contact details of CBWTF operator at Quarantine Camps.

4) Provide necessary support, security including authorisation to staff of CBWTFs.

5) ULB shall engage CBWTF operator for ultimate disposal of biomedical waste collected from quarantine home/home care or waste deposition centers or from door steps as may be required depending on local situation; ULB shall make agreement with CBWTF in this regard.

6) ULBs envisage following options to facilitate safe collection and disposal of biomedical waste from quarantined homes/Home care;
   a. Engage authorized waste collectors for door steps collection of biomedical waste and transfer to collection points for further pick-up by CBWTF; and/or
   b. In case numbers of quarantined homes/Home-care units are less, ULBs may engage services of CBWTFs to collect the waste directly from door-steps.

7) Provide yellow colored bags (designated for BMW) to the persons responsible for operating Quarantine Camp or home-care. If required, such bags may be provided through CBWTF.

8) ULBs shall ensure the following in engaging authorized waste collectors at door-steps or at waste deposition centers;
   a. Create a separate team of workers who shall be engaged in door step waste collection at waste deposition centres or at quarantine homes or home care.
   b. Ensure that only designated staff collects biomedical waste from quarantine homes or home care.
   c. Training should be provided for sanitization, about collection of biomedical waste, precautionary measures to handle biomedical waste.
   d. Impart training to waste collector in handling of biomedical waste including methods of sanitization. Training to waste collectors should be arranged through CBWTF operators.
   e. The staff involved in handling and collection of waste from quarantine homes or home care centers shall be provided with adequate Personnel Protective Equipment such as three layer masks, splash proof aprons/gowns, heavy-duty gloves, gum boots and safety goggles. These PPEs are required to be worn all the time while collecting of waste from quarantine center/quarantine homes/home care/waste deposition centres.
   f. Use dedicated carts / trolleys / vehicles for transport of biomedical waste. Ensure sanitization of vehicles with 1% hypochlorite after each trip.
   g. Ensure that, waste collectors arriving at quarantine center or at home care shall spray the disinfectant (1% hypochlorite solution) on the bin used for yellow bag.
9) Establish common waste deposition centers (as stipulated under SWM Rules, 2016) for receiving / collection of biomedical waste. For this purpose, existing Dhalaos if any may be converted suitably.
10) The general solid waste collected from quarantine homes or home care shall be disposed off as per SWM Rules, 2016.
11) Services of Common Biomedical Waste Treatment & Disposal Facilities (CBWTFs) and staff associated with CBWTFs for collection, transportation, treatment and disposal of biomedical waste generated from hospitals including COVID-19 isolation wards, Quarantine Camps, etc. may be considered an essential service as part of health infrastructure.
12) Facilitate smooth operations of CBWTFs.
13) Local agencies / ULBs may take additional measures considering prevailing ground situations and feasibility, however while implementing such measures requirements outlined in these guidelines should be complied.

**In connection with management of wastewater from HCFs / Isolation Wards following guidance recommended for HCFs and the operators of STPs:**

1) Responsible agencies are Healthcare Facilities / Isolation Wards / operators of terminal sewage treatment plants (PHED/Jal Board/etc.).
2) HCFs and the agencies operating Sewage Treatment Plants should continue to ensure disinfection of treated wastewater as per prevailing practices to inactivate coronaviruses.
3) Operators of ETPs/STPs attached with discharge from Healthcare Facilities and isolation wards should adopt standard operational practices, practice basic hygiene precautions, and wear personal protective equipment (PPE) prescribed for operation of STPs. PPEs should include Goggles, face mask, liquid repellant coveralls, waterproof gloves and Rubber boots.
4) During the period of COVID-19 pandemic, utilization of treated wastewater in utilities within HCFs may be avoided.

**Social Distancing:**

Social Distancing is an important measure to fight against COVID-19 and minimize the probability of spreading of the virus in the community, including family members. COVID-19 spreads mainly among people who are in close contact (within about 6 feet) for a prolonged period. Spread happens when an infected person coughs, sneezes, or talks, and droplets from their mouth or nose are launched into the air and land in the mouths or noses of people nearby. The droplets can also be inhaled into the lungs. Recent studies
indicate that people who are infected but do not have symptoms likely also play a role in the spread of COVID-19.

Social Distancing is a way to break the chain of COVID-19 Pandemic which will definitely help us to stay safe and far way from such fetal disease. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or eyes. However, this is not thought to be the main way the virus spreads. COVID-19 can live for hours or days on a surface, depending on factors such as sunlight, humidity, and the type of surface. Social distancing helps limit opportunities to come in contact with contaminated surfaces and infected people outside the home. Although the risk of severe illness may be different for everyone, anyone can get and spread COVID-19. Everyone has a role to play in slowing the spread and protecting themselves, their family, and their community.

Some suggestions for maintaining social distancing

- Follow guidance from authorities where you live.
- If you need to shop for food or medicine at the grocery store or pharmacy, stay at least 6 feet away from others. Also consider other options:
  - Use mail-order for medications, if possible.
  - Consider a grocery delivery service.
- Cover your mouth and nose with a cloth face covering when around others, including when you have to go out in public, for example to the grocery store.
  - Cloth face coverings should NOT be placed on children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated, or otherwise unable to remove the mask without assistance.
  - Keep at least 6 feet between yourself and others, even when you wear a face covering.
• Avoid gatherings of any size outside your household, such as a friend's house, parks, restaurants, shops, or any other place. This advice applies to people of any age, including teens and younger adults.
• Work from home when possible.
• Avoid using any kind of public transportation, ridesharing, or taxis, if possible.
• If you are a student or parent, talk to your school about options for digital/distance learning.

Some of the common terms related to COVID-19

**Quarantine** means restricting activities or separating people who are not ill but may have been exposed to COVID-19. The goal is to prevent spread of the disease at the time when people just develop symptoms.

**Isolation** means separating people who are ill with symptoms of COVID-19 and may be infectious to prevent the spread of the disease.

**Self-isolation** is when a person who is experiencing fever, cough or other COVID-19 symptoms stays at home and does not go to work, school or public places. This can be voluntarily or based on his/her health care provider's recommendation.

**Social/Physical distancing** means being physically apart. WHO recommends keeping at least 1-metre distance from others. This is a general measure that everyone should take even if they are well with no known exposure to COVID-19.
Change in life due to COVID-19

The impact of a global pandemic brought a drastically change in human behaviour. Right now, it feels impossible to predict what the world will look like next week, let alone next year. It has been suggested by many experts that COVID-19 will transform our daily lives in the long run. The changes in progress — some predictable, others still hard to fathom. Many ongoing surveys reported that the coronavirus had already created significant shifts in people’s behaviour. Among the top findings: Approximately 85 percent of people reported washing their hands or using sanitizer more often than before, and around 61 percent reported following social distancing guidelines. Some of the essential changes introduced in the human regular lifestyle due to birth of Novel Coronavirus are:

- Washing hands frequently with soap and maintaining hygiene for the safety
- Cleanliness at home and work place with action like surface sanitation, neat and clean clothes, use of sanitizer at frequently used items etc
- Washing & sanitation of fruits, vegetables and other commodities brought from market with special care.
- Reduced social gathering at Super Markets, Cinema Halls, Restaurants and other public places.
- People are spending more quality time with family and can explore some qualities and innovation of self esteemed talents.
- The Work from Home strategy has proofed very beneficial to the working personnel's and they are capable of giving productive output with quality work with this new culture.
- Wearing Mask and maintaining distance of minimum 1 meter with every individual has become a part of life
- Online classes and digital education has been found the spotlight for school and college students, where knowledge sharing cannot be stopped due to pandemic.
Positive Approach of Mind:

The world is going through a tough time to fight against the major impact of this pandemic. Every day, there is a fear for family and close ones to get affect due to contamination of COVID-19. A regular war with the unseen enemy in our day to day life has become challenging. We should all respect the massive contribution and efforts of our shield for everyday fight - Doctors, Nurse, Police, Army and many more. A positive approach on mind definitely leads us towards our goal with our positive attitude. Some tips to stay positive during this stressful time

1. **Practice gratefulness**: Even when life seems miserable, there are things we still have for which we should be grateful. Keep a gratefulness journal or do a quick morning gratefulness meditation. Notice both significant and small items for which you are thankful. Important things can include your home and shelter, your health, your family, your friends, your ability to put food on your table, and other essentials. Small things are more momentary pleasures, like a hot cup of coffee, a calming bath, a good book, or a funny meme. Be sure to include as much detail into your gratefulness practice as possible.

2. **Start your day with a positivity routine**: Morning routines are important to begin with, but even more so during times of crisis. Don’t reach for your phone to check the news as soon as you wake up or while you’re still in bed. Take a few minutes to find yourself – and smile. You’d be surprised at how incredibly powerful a morning smile can be in helping you start your day on a positive note. If you can, does a quick meditation practice, even if it’s only a few minutes long, before you get out of bed. You can even make that gratefulness practice your morning meditation routine.

3. **Slow down**: Don’t rush into things, including any conclusions about information you’re getting from the news or things you’re hearing from family and friends. There is no need to hurry right now. One of the benefits of social isolation is your ability to pace yourself and let go of some usual anxieties. Pay attention to and enhance your awareness by practicing continuous mindfulness. You can do this by trying to remain as present as possible. Focus on the details around you, like scents, and sounds. Lower the volume of your thoughts, so you can hear your inner voice.

4. **Relax your body**: Check-in on your muscles regularly and if you’re tensing up your jaw, or your shoulders, or if you’re frowning, breathe and relax. Get into the habit of doing quick body scans throughout the day. From your scalp to your toes, be aware of your body, your muscles, and your breathing. This also helps make mindfulness an ongoing aspect of your daily life.
As on 19th May, 2020, worldwide figure due to the impact of the pandemic, there have been 4,735,622 confirmed cases including 316,289 deaths, as per WHO(World Health Organization). Following are the figures of highest affected countries with confirmed cases due to COVID-19:

**Top 10 Countries across the globe:**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Country</th>
<th>Confirmed Cases</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>United States of America</td>
<td>1477516</td>
<td>89272</td>
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<tr>
<td>2.</td>
<td>Russian Federation</td>
<td>299941</td>
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<tr>
<td>3.</td>
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<td>10.</td>
<td>Iran</td>
<td>124603</td>
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</tr>
</tbody>
</table>

As per, the Ministry of Health and Family Welfare, Government of India there have been 106750 confirmed cases of COVID-19 in India, including 3303 deaths, as on 20th May. Following are the figures of highest affected states in India with confirmed cases due to COVID-19:

**Top 10 States in India:**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Country</th>
<th>Confirmed Cases</th>
<th>Death</th>
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<tr>
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</table>
Initiative taken by Tripura ENVIS Hub to raise the awareness of COVID-19 in Public Interest.
With the hope to see the world revive in its own form, let us radiate positive vibration for the well-being of the humanity and environment. As we head out of this pandemic we can see the better version of nature. In a challenging time like this, it is our responsibility to overcome all the obstacles and help each other.

Let’s fight against COVID-19
We shall over come
Be safe and alert

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