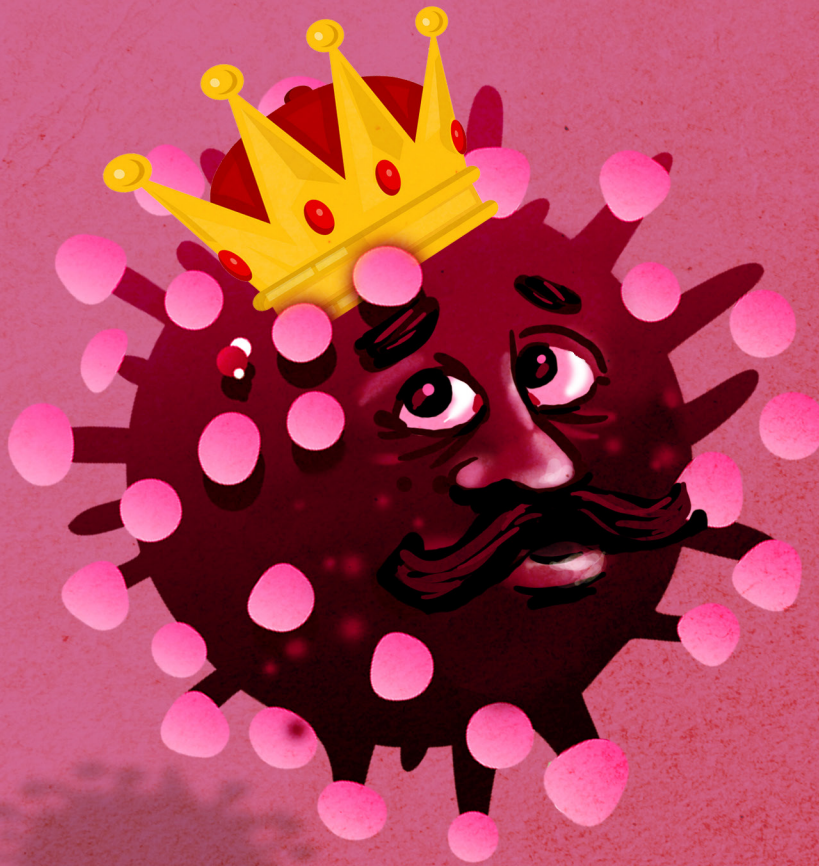


# COVID KATHA

A Multimedia Guide for Mass Awareness



National Council for Science & Technology Communication  
Department of Science and Technology, Govt. of India

Dr Anamika Ray Memorial Trust



**Armt**





## डॉ हर्ष वर्धन Dr Harsh Vardhan

स्वास्थ्य एवं परिवार कल्याण, विज्ञान और प्रौद्योगिकी  
व पृथ्वी विज्ञान मंत्री, भारत सरकार

Union Minister for Health & Family Welfare,  
Science & Technology and Earth Sciences  
Government of India

सबका साथ, सबका विकास, सबका विश्वास  
Sabka Saath, Sabka Vikas, Sabka Vishwas

### Foreword

The first lesson that Novel Coronavirus (SARS-COV-2) has taught the world is Namaste! A major cultural practice to inculcate a sense of social distancing to avoid any kind of infection. Greeting each other with Namaste has been an integral part of Indian culture since time immemorial. Similarly, most of our traditions and customs have a scientific basis, be it food with spices having medicinal values, Yoga and meditation with physical and mental rejuvenation festivals and rituals with seasonal and astronomical cycles, and so on.

2. In addition to widely accepted Yoga, the world has now started realizing the deep-rooted Indian concepts and knowledge systems of wellbeing, especially during the current outbreak of COVID-19. At the same time, it also teaches why investments in education, health services and scientific temperament are most crucial for the nations and societies, and why societies should refrain from over exploitation of natural resources and over consumerism! A balanced approach is a must for overall wellbeing of mankind.

3. Preventive and proactive health and risk communication is the strategic mantra especially during public health emergencies like this. Much before COVID-19 was declared as a public health emergency, India has been taking actions to strengthen core capacities, such as augmenting healthcare infrastructure, capacity building of various stakeholders, promoting breakthrough research and undertaking public awareness campaigns using a novel theme of ringtone messages advertising do's and don'ts on mobile phones and telephones, amongst others. Since the onset of the outbreak India has taken leadership and assisted neighbouring and other countries in multiple ways. The healing power of the traditional Indian doctrine of '**Vasudhaiv Kutumbakam**' is evident and recognized the world over.

4. As our scientists and doctors are exploring new and innovative measures to minimise the risk, effective communication at mass scale about necessary health and personal hygiene will provide further reinforcement to our efforts towards mitigating COVID-19 outbreak.

5. I am happy to learn that the National Council for Science & Technology Communication (NCSTC), Department of Science & Technology in association with Anamika Ray Memorial Trust (ARMT) has come up with a comprehensive science and health communication initiative along with an online multimedia resource guide on A-to-Z of COVID-19 titled 'COVID Katha – A Multimedia Guide for Mass Awareness'. I have found it as extremely useful and exemplary science communication solution for the people at large in the present scenario. It is freely accessible on smart phones, desktop computers as well as other electronic devices.

6. This creative communication channel may help numerous Corona Warriors and have far reaching efforts of building mass awareness on current health and social crisis. It is designed to educate on the objective interpretation of scientific aspects. I am hopeful this resource will strengthen public understanding of science and health in the special context of COVID-19.

I congratulate the team involved in this creative and innovative endeavour.

  
(Dr. Harsh Vardhan)

May 01, 2020

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# Preface

The current scenario of a pandemic has posed concerns and challenges all around where scientific awareness and health preparedness can play a significant role to help combat the situation with translation and usage of authentic scientific information and to convey the risks involved and facilitate the communities to overcome the situation. An effective science and health communication effort for promoting grass-root level appreciation and response on the subject would be an advantage for saving and shaping the lives of the people at large as well as building confidence, inculcating scientific temper and promoting health consciousness amongst them to overcome the situation.

As we are aware, COVID 19 pandemic has created global health emergency today. The virus has so far paused normal lives of the people compelling to stay indoors, work from home, maintain social distancing and hygiene. In the present state of uncertainty, enormous confusion is created among common man due to abundant supply of misinformation, disinformation, fake news, mis-beliefs and rumors on various media platforms including social media. While steps are being taken by different organizations to curtail and check such info-demics, there is a need of concerted and sustained efforts to educate and enable people to take informed decisions after due verification and analysis especially when it comes to health and wellbeing of the people at large.

The National Council for Science & Technology Communication (NCSTC), Department of Science and Technology is the apex body of the Government of India to promote scientific awareness and scientific temper among masses. In view of the present crisis, the NCSTC has initiated a nationally coordinated comprehensive programme on health and risk communication with focus on COVID 19. A wide array of programmes and activities built around awareness and outreach have been envisaged involving print, electronic, digital, folk and interactive media to reach out to large cross sections of the society. In order to facilitate necessary actions and preparedness of the society and to address the crisis, the strategies were worked out by involving academic, research, media and voluntary organizations.

In view of providing consolidated and authentic information on the global crisis to the masses in an interesting and interactive mode, the NCSTC in association with Dr. Anamika Ray Memorial Trust (ARMT), an educational and research organization, has brought out multimedia guide carrying important information on A-to-Z of COVID 19, titled "COVID Katha – A Multimedia Guide for Mass Awareness".

Since its advent, multimedia has been an effective means of communication and outreach. The innovative guide offers an interactive mode and one can find text, audio-visual, graphics and other multimedia forms by clicking on the hyperlink to access desirable information. Scientoons while carrying science messages and explaining the health concepts in simple manner also add humour and amusement during the global health crisis when people feel dull and stressed!

We are pleased to present the multimedia guide before the esteemed audience and hope you'll enjoy while going through it and exploring information.



(Ashutosh Sharma)

Secretary

Department of Science and Technology

Ministry of Science and Technology

Govt. of India, New Delhi

22 April 2020

Earth Day

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# Aarogya

Aarogya Setu App and understanding to fight COVID-19



## AAROGYA

Aarogya means a disease free and healthy body, mind, and surrounding that support overall sustainable health and wellbeing.

## ANTIDOTE

World scientists are still in a race to find a coronavirus antidote for its cure. Antidotes are meant for permanent cure of any disease.

## ANTIBIOTIC

Antibiotics work for bacterial infections as per physician's direction, not for viruses; and COVID-19 is caused by a virus.

## AAROGYA SETU APP

Aarogya Setu, a mobile application developed by the Ministry of Health & Family Welfare, Government of India, is about a facilitation of combined-fight against COVID-19. This is an initiative particularly to reach out the people and inform them the risks, best practices and relevant advisories pertaining to the containment of COVID-19.



@CovidIndiaSeva



# Basics

Strengthening immunity



## BOOSTING IMMUNITY

The immune system of a human body defends or protects it from getting infected to any disease; and low immunity is vulnerable to the novel coronavirus. Therefore, it is important to keep the immunity high of the people. For this, low carbohydrate diets are more important that help control high blood sugar and pressure; slow down diabetes and focus on protein-rich diet to keep you in good shape.

To boost the immunity, WHO prescribed regular consumption of vegetables and fruits rich in Beta carotene, Ascorbic acid and other essential vitamins A, B and C enriched foods like mushrooms, tomatoes, carrots, citrus fruits, bell pepper, etc., and green vegetables like broccoli, spinach, etc., to build resilience in the body against infections.





# Cause

Tracing the origin of COVID-19



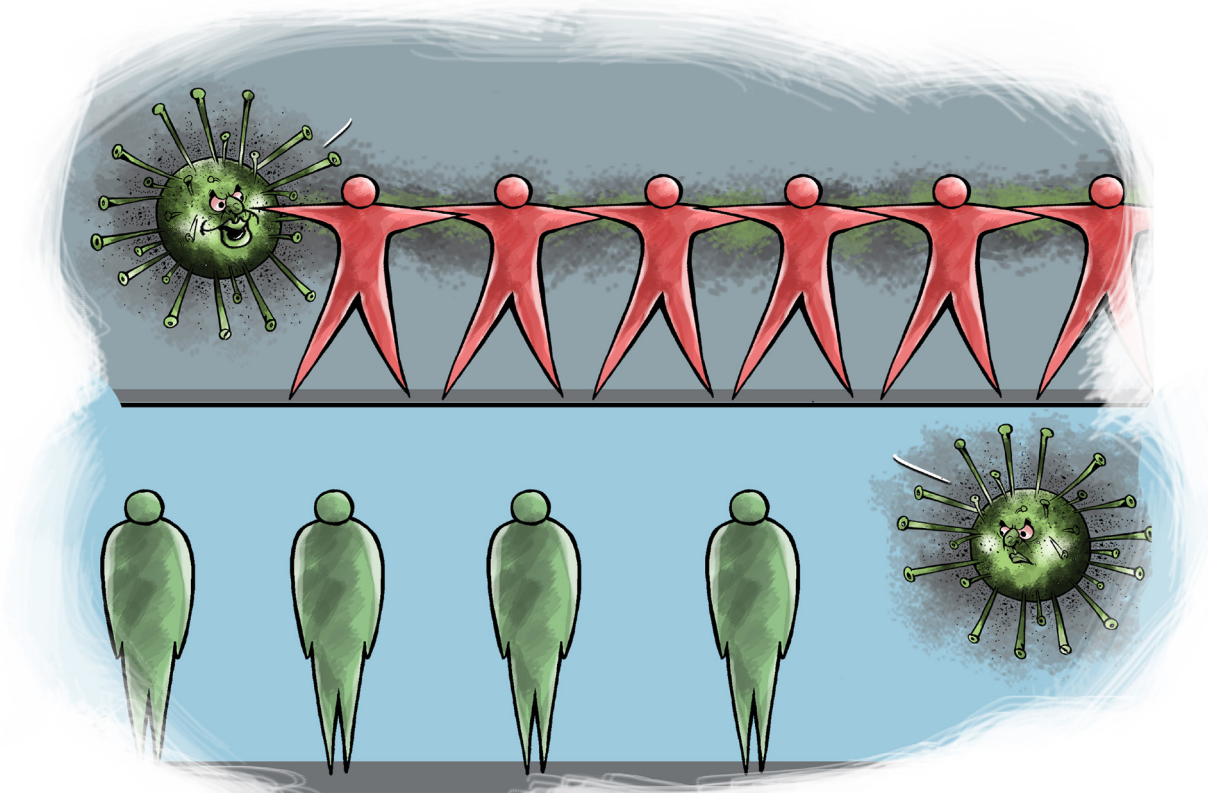
## CORONAVIRUS

Coronaviruses belong to a large family of viruses that cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes COVID-19.



# Discipline Matters

Disciplined preventive restrictions



## DISTANCING

Social and physical distancing is the immediate, disciplined and the most effective action to fight against the threat. Social distancing deliberately increases the physical space between people to avoid spreading infection. Staying at least one metre, i.e. six feet away from other people lessens the chances of spread of infection.

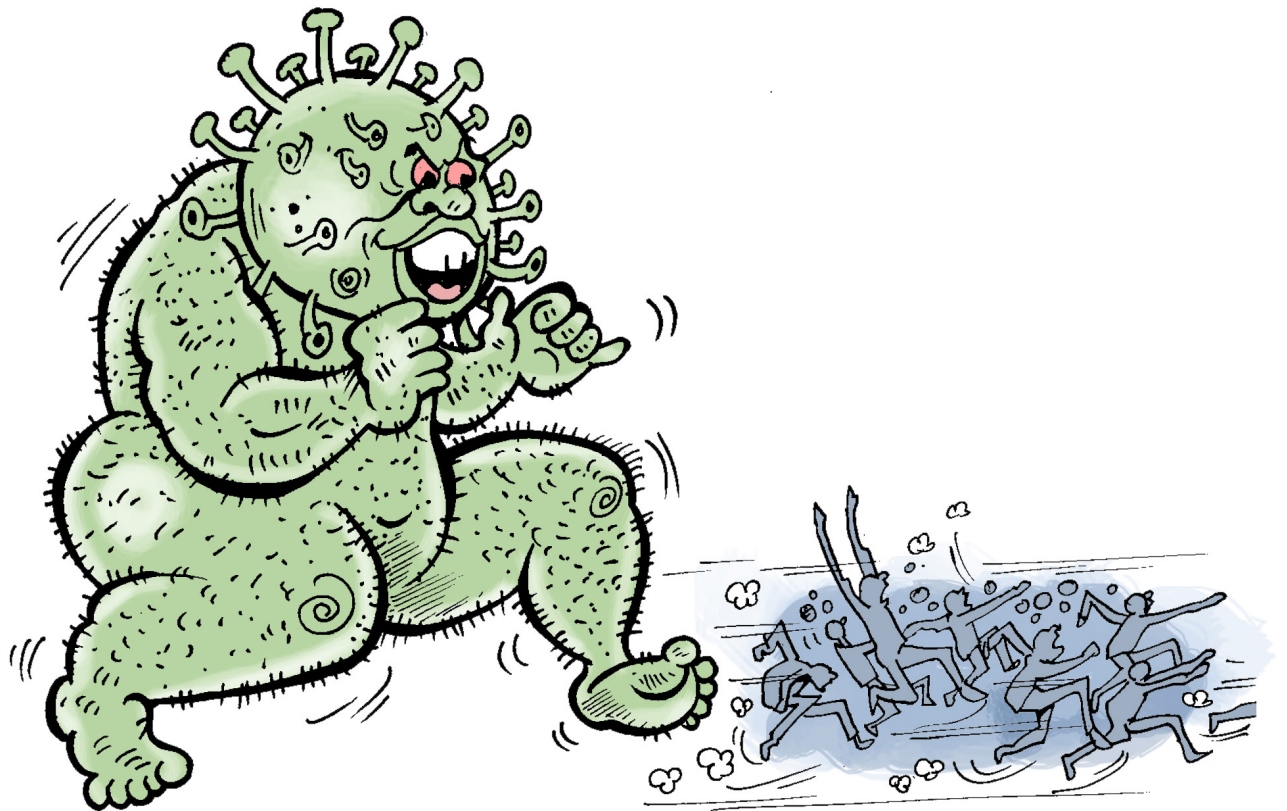
It is a transmissible disease. The disease can spread from person to person through small droplets from the nose or mouth when a person with COVID-19 sneezes, coughs or exhales. These droplets land on objects and surfaces around the person, which then comes into contact to other people by touching these objects or surfaces. The virus also spreads if they breathe in the aerosol formed in the air by with the droplets from a person when he or she sneezes, coughs out or exhales droplets. Aerosol is a suspension of fine particles or liquid droplets in air or another gaseous atmosphere.





# Extremes

Extreme consequences



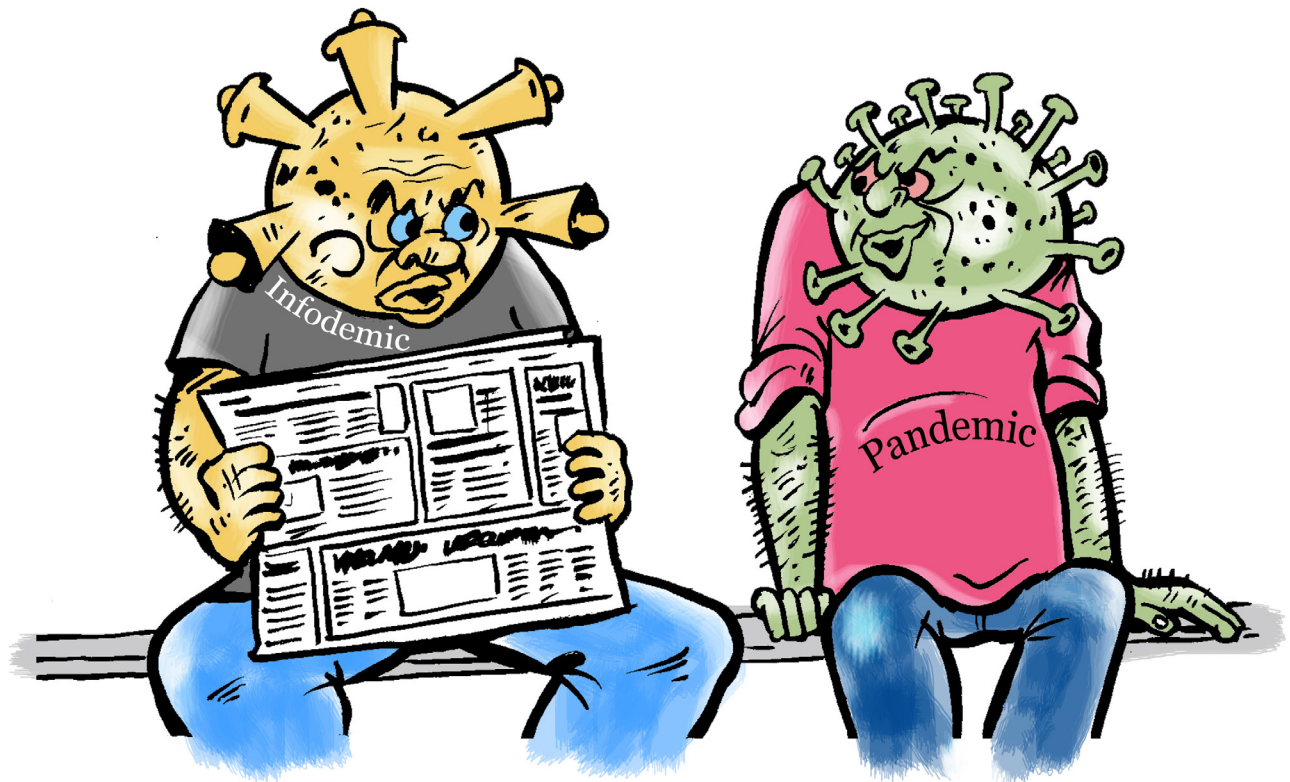
## EMERGENCY

The COVID-19 outbreak was declared a Public Health Emergency of International Concern on January 30, 2020. The virus has grossly interrupted the normal lives of the people and created panic in the society. It has created chaos and increased the fear and anxiety among the people. It has become a great challenge for the administration and the government to control it till a cure is invented. Therefore, the consequence has reached to the extreme position globally.



# Falsification

Fabricated information on the pandemic



## FACT CHECK ON FAKE INFORMATION

Info-demic refers to the epidemic of misinformation in current context on Covid-19 crisis. It is simply all about the fake news or information disorder on the outbreak of this disease that misleads the trust of people from public healthcare system. This poses a serious threat to people's dependence on the sources of information during this risk and crisis period that may add extra problems. The World Health Organization on February 15, 2020 launched a platform to combat the increasing hold of misinformation called Info-demic spread around COVID-19. Therefore, it has become as important to flatten the curve of the Info-demic as to flatten the curve of COVID-19. Press Information Bureau (PIB), Govt. of India has launched a factcheck portal. ARMT has launched an awareness campaign #CheckTheFake to combat info-demic.





# Goals

Systematic efforts to achieve the goals of containing the virus



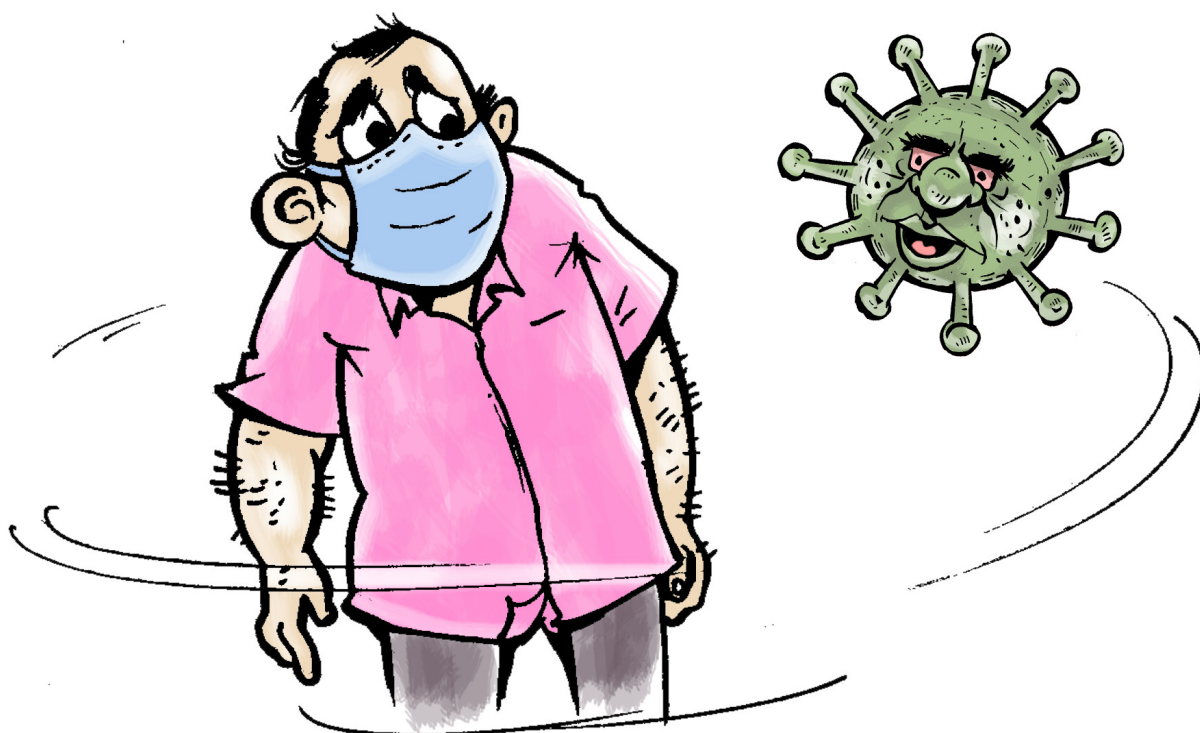
## GLOBAL GUIDELINES

Regularly and thoroughly cleaning hands with an alcohol-based sanitizer by hand rub or washing hands with soap and water, maintaining at least one metre distance from person having cough or sneezing, avoid touching your eyes, nose and mouth, following good respiratory hygiene, like covering mouth and nose with bent elbow or tissue while coughing or sneezing, staying at home and updating on the latest advisories, are some of the precautions globally prescribed by the WHO that can reduce the chances of being infected or spreading COVID-19.



# Help

Self-help guidance for virus prevention



## HYGIENE

In order to protect oneself from the deadly virus, it is very important to maintain the minimum hygiene at home, i.e. maintaining the basic cleanliness. This cleanliness is not only limited to one's body; but must be associated with the cleanliness of surroundings and hygienic consumption of food. Use of mask is essential if a person has cough and sneeze. Now normal masks are essential for all who venture to move out and meet people for unavoidable urgent work.

## HYDROXY- CHLORO- QUINE

It is an anti-malarial drug that at present is pampered as a potential weapon to fight against the novel coronavirus all over the world. Even for some countries, it is believed as a 'miracle cure' for COVID-19, though experts believe that it's too early to draw any conclusions. There has been various clinical trials going on with this drug across the world. And fortunately, India as the largest producer of this drug is helping the world by exporting the drug to a large number of countries.





# Infliction

Interfering the healthy societal structure



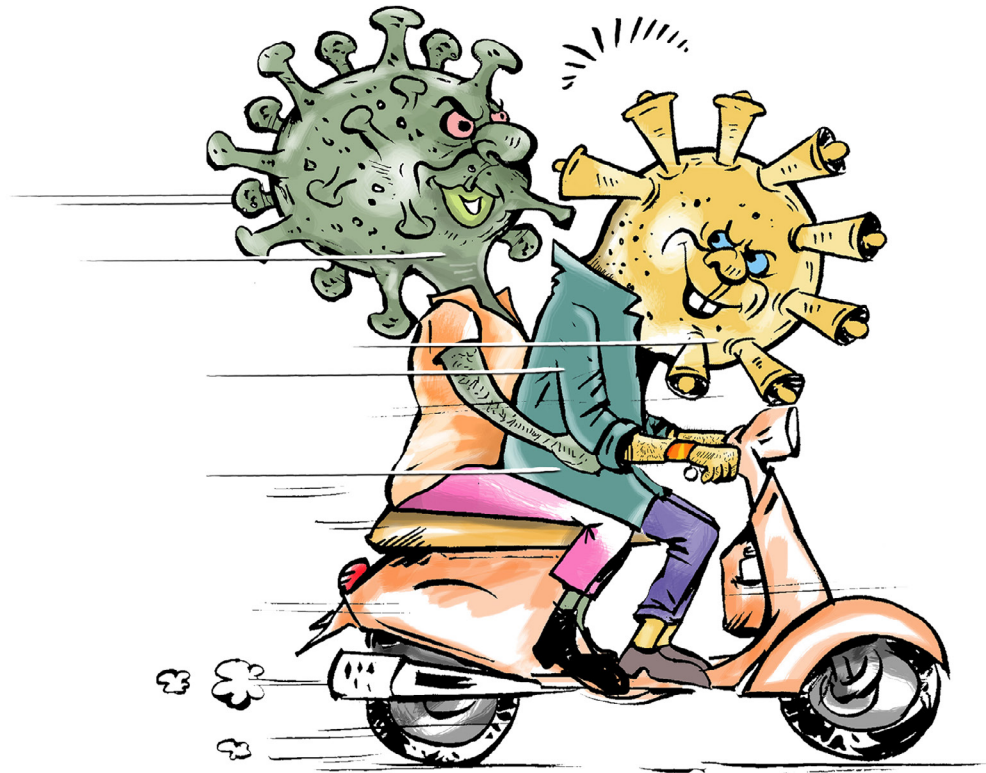
## INFECTION

It is about causing pain or damage not only to the body of human beings; but to the mental stability and hope of a person that have the capability to break our healthy societal structure. COVID-19 has done similar damage. Infection of COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important to practice respiratory etiquette (for example, by coughing into a flexed elbow). This may cause influenza that is a viral infection of virus blocking the usual respiratory passage causing fever, cough and other symptoms for the COVID-19 disease.



# Joint Efforts

Coordination and cooperation is the key



## JUBILANT WARRIORS

Those, who are joining this crisis of pandemic as a frontline warrior and volunteer are jubilant in nature as they are confidently working day and night to get triumph over this deadly disease. At the same time, they are also happy to serving the nation, more importantly while saving humanity.

## JOURNEY

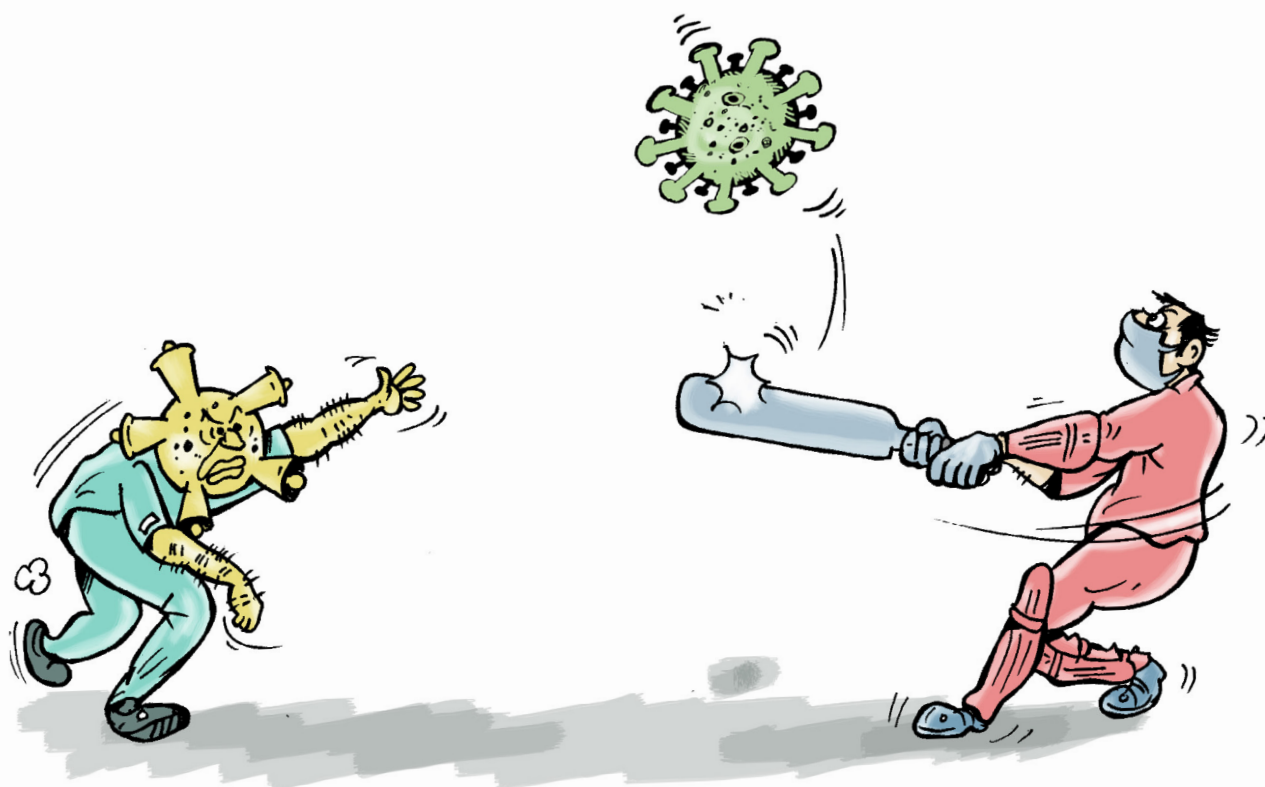
It is very important to avoid all kinds of non-essential travels. Most COVID-19 positive cases are imported, which later spread to those who came into contact of the person who brought the disease while travelling abroad and became fomites. Fomites are the objects or materials which are likely to carry infection.

It is important to avoid being exposed to the public transport system and public places to avoid any likelihood of exposure. In case one has to travel, he/ she should make sure to cover their nose and mouth with a mask and carry an alcohol-based hand sanitizer, at all times.



# Knowledge

Knowledge is the power to cope with



## KNOWING THE COVID-19

As we know, the WHO has displayed the general knowledge about the virus on its website and have been trying to channelise this knowledge through various media and communication platforms, like WhatsApp, etc. It is practically important for each individual to have the basic knowledge about the virus and spread the same to their near and dear ones.

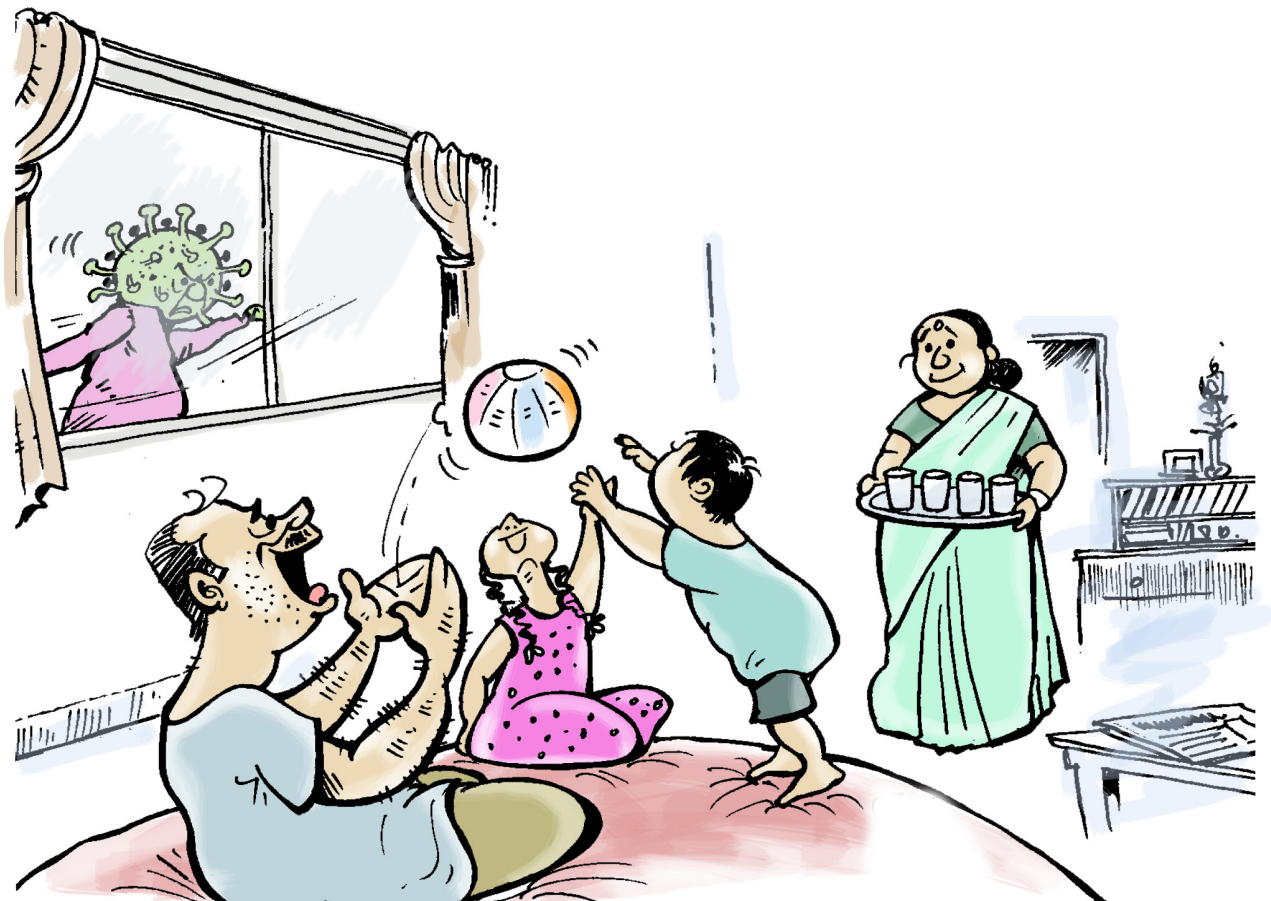
The Govt. of India launched a scientific portal to get information on COVID-19, i.e. COVID Gyan. This website serves as a hub to bring together a collection of resources in response to the COVID-19 outbreak. These resources are generated by public supported research institutions in India and associated programmes. The content is based on the best available scientific understanding of the disease.





# Life

Pandemic affects the lifestyle



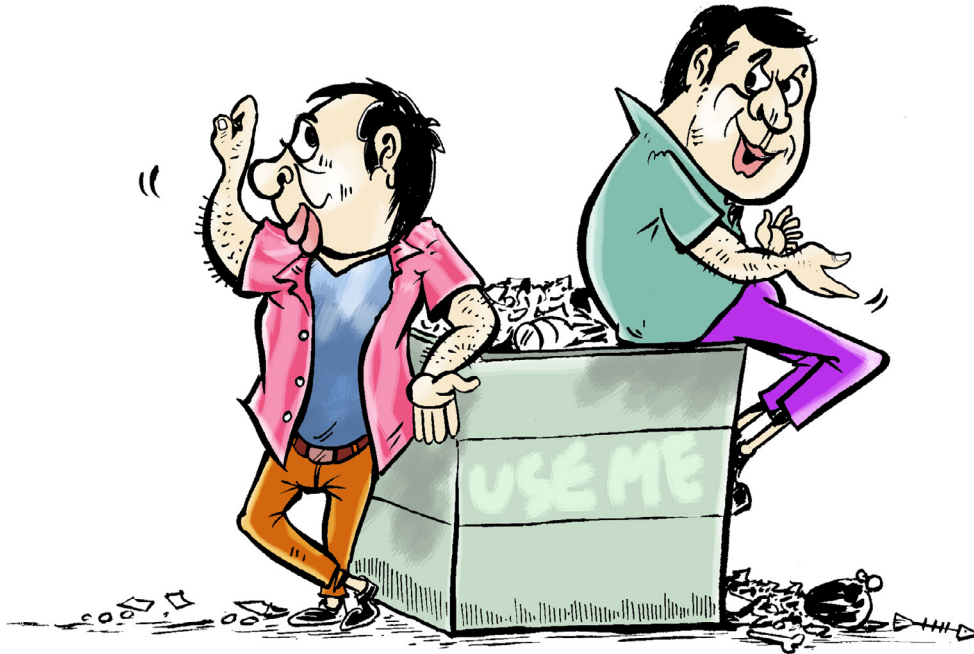
## LOCKDOWN

The seriousness of the disease and its increasing rate led to the national lockdown in various countries. This is done as an emergency protocol that prevents people from moving out of a given area. A full lockdown means that one must stay where they are and must not exit or enter a building or the given area. This scenario usually allows for essential supplies, grocery stores, pharmacies and banks to continue to serve the people. All non-essential activities remain shut for the entire period. In India, the lockdown was initially given for 21 days, which was later extended to another 19 days, i.e. 40 days altogether.



# Misconceptions

Misbeliefs lead to disaster



## MYTHS

There are certain myths that need to be clarified, such as, weather has no or little link with the spread of coronavirus, it is not yet proved that it transmits through animals or insects, like mosquitoes, hot water consumption or hot bath do not contain it, hand dryers, alcohol or chlorine, any antibiotics or garlic do not kill it, etc. Even the use of N95 mask is not necessary for public. It is required for the healthcare workers and doctors who are involved in the corona virus treatment. WHO recommends to wear the mask if one has the symptoms (especially coughing). In fact, rational use of medical masks is important to avoid unnecessary wastage of precious resources and misuse of masks and resultant shortage of masks.

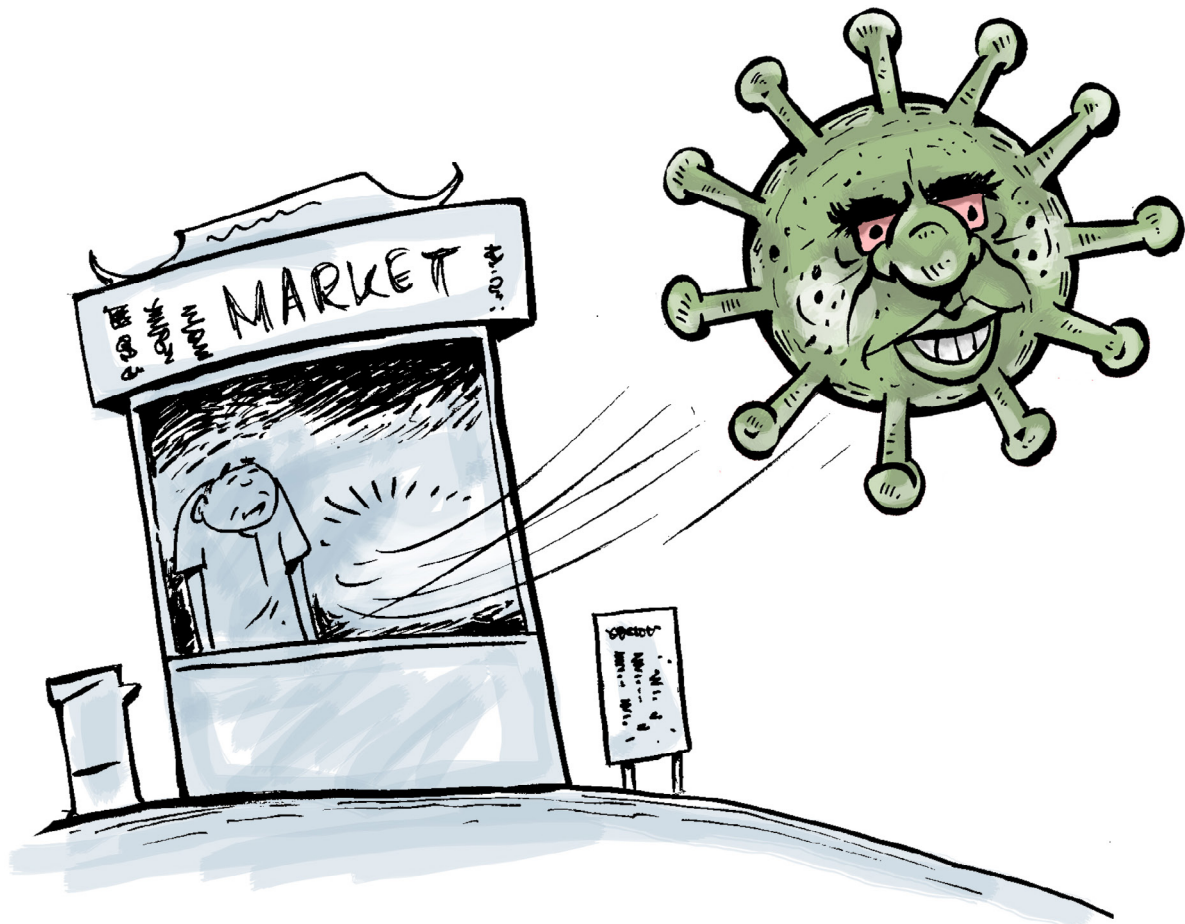
## MIS-BELIEFS

Some possibly due to their upbringing and cultural settings feel that the virus will not cause infection to them and try to break the rules of health hygiene and lockdown; they need to be educated and motivated to follow the guidelines and instructions issued by the authorities from time to time, especially during the present crisis, for their own safety and wellbeing of the society.



# Naming

WHO recognises the new name, scale and nature of the virus



## NAMING

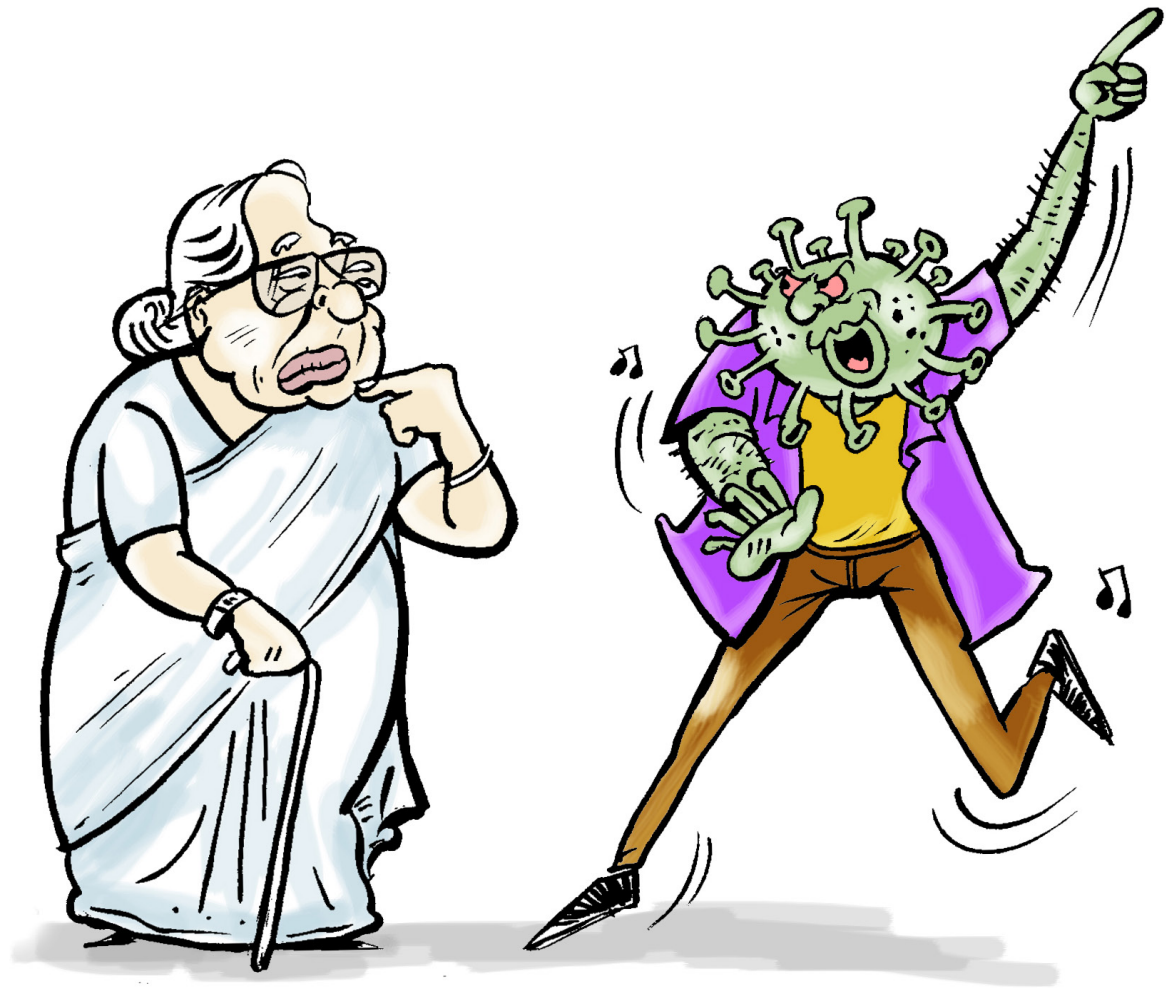
WHO announced “COVID-19” (previously known as 2019 novel coronavirus) as the name of this new disease on February 11, 2020, following guidelines previously developed with the World Organisation for Animal Health (OIE) and the Food and Agriculture Organization of the United Nations (FAO). This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. It's believed that in December 2019 someone at Huanan Seafood Market in Wuhan was infected with a virus from an animal.





# Ominous Age

Vulnerable age groups



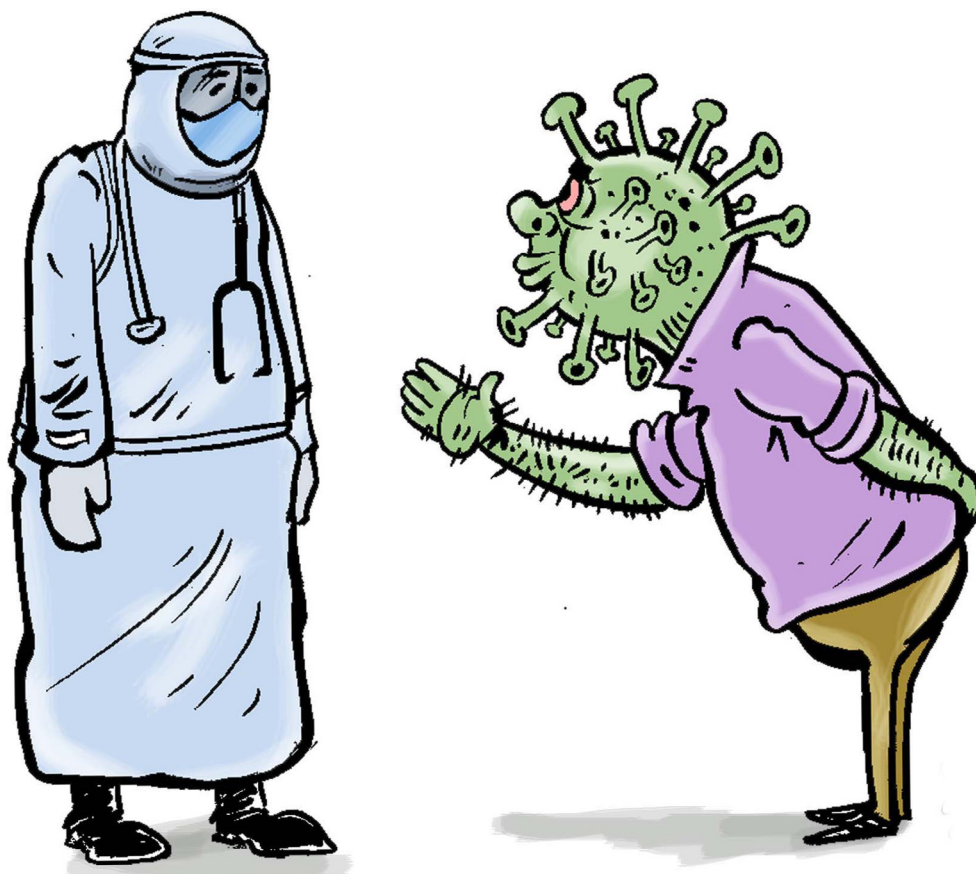
## OLDER AND CHILDREN

A particular age is an ominous sign for people suffering from COVID-19. While people are still learning about how COVID-2019 affects them, older persons and persons with pre-existing medical conditions (such as high blood pressure, heart disease, lung disease, cancer or diabetes) appear to develop serious illness more often than others. Even children in some countries like China, UK, etc., are seen vulnerable to this deadly virus.



# Protection

Protecting and preventing the attack of virus



## PANDEMIC

WHO made the assessment that COVID-19 can be characterised as a pandemic on March 11, 2020 at a media briefing. Pandemic is the global epidemic, the term signifies the prevention of the deadly disease.

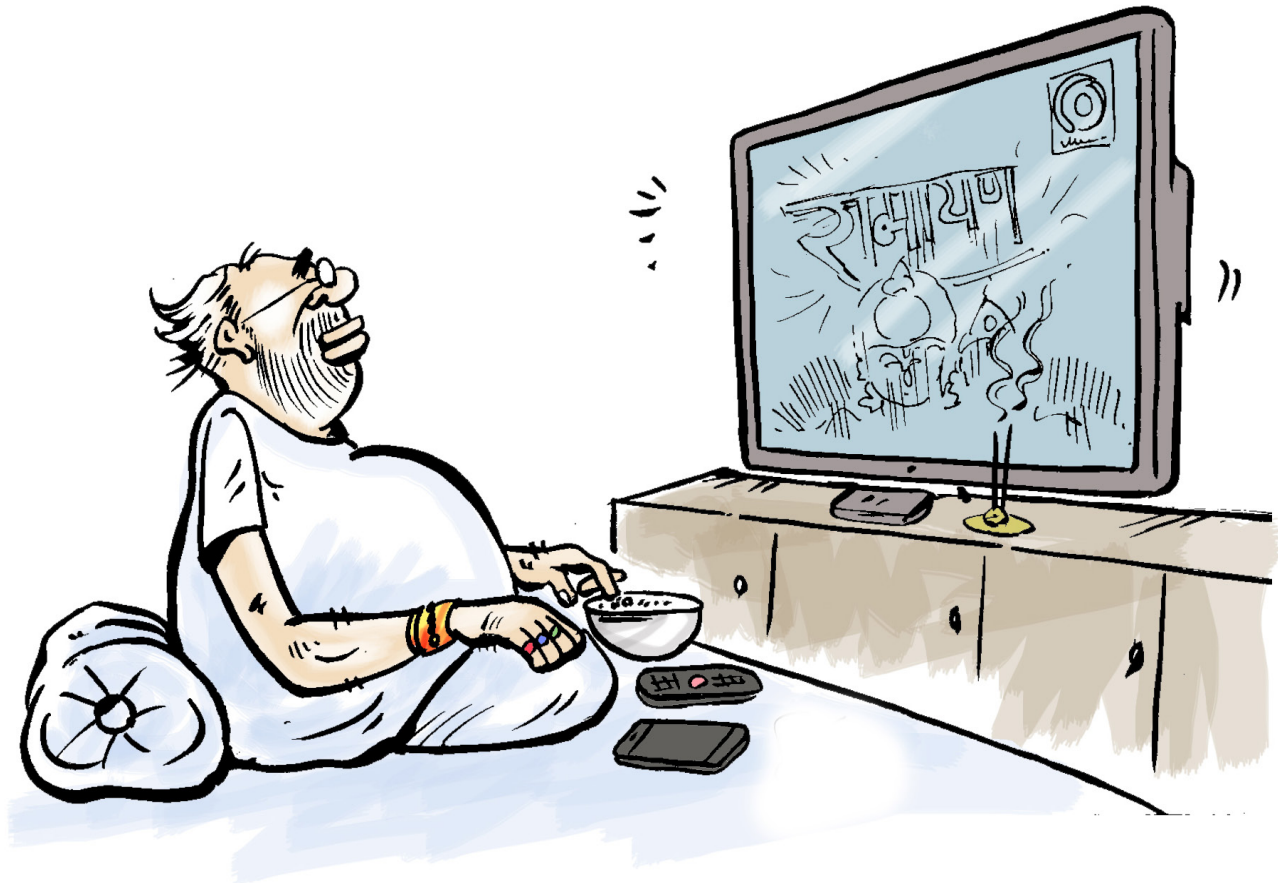
## PPE

Infection prevention and control measures include, among others, hand hygiene, Personal Protective Equipment (PPE) and waste management materials. The PPE consists of garments placed to protect the healthcare workers or any other persons from infection. These usually consist of standard precautions and gloves, mask, gown. These are the basic requirements, especially for the frontline workers.



# Quiet and Quit

The simple mantra is to remain quiet indoors till the virus quits



## QUARANTINE

People who have been exposed to the new coronavirus and are at risk of COVID-19 must practice self-quarantine. Quarantine is about isolating oneself from the society and people to contain the spread of the virus. Health experts recommend that self-quarantine lasts 14 days. People who have recent travel history or have been knowingly exposed to an infected person must quarantine themselves without having any visitors, staying at least 6 feet away from other family members, maintaining hygiene and not sharing towels or utensils. Once the quarantine period is ended, one need to simply follow the doctor's instructions to get back to normalcy.





# Risk and Response

Reaching out to the grass-root level

# R



## RISK COMMUNICATION & COMMUNITY ENGAGEMENT

Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response tool is designed to support risk communication, community engagement staff and responders working with national health authorities, and other partners to develop, implement and monitor an effective action plan for communicating effectively with the public, engaging with communities, local partners and other stakeholders to help prepare and protect individuals, families and the public health during early response to COVID-19.

In view of the present crisis, the NCSTC has initiated a nationally coordinated comprehensive programme on health and risk communication with focus on COVID 19. A wide array of programmes and activities built around awareness and outreach have been envisaged involving print, electronic, digital, folk and interactive media to reach out to large cross sections of the society.



# Sight and Fight

Constant monitoring and watch over the situation may help



## SYMPTOMS

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhoea. These symptoms are usually mild and begin gradually. Sometimes, infected people don't develop any symptoms. Around 1 out of every 6 people who get COVID-19 becomes seriously ill and develops difficulty in breathing.

## STRENGTH

In order to come out of the shock to the mental and physical health caused by the virus, people need to strengthen their minds. This will bring in them a stability and help in taking right decisions during this pandemic.



# Testing Trends

Global efforts to flatten the curve



## TRACK TRACE AND TEST

Finding the place and people infected and test them to easily contain the spread of novel coronavirus can be done through this excellent thread of track, trace and test. It has emphasised upon the more and more testing; but before that it underlies the importance of tracking and tracing it.

Recently, Sree Chitra Tirunal Institute for Medical Sciences & Tech, Trivandrum, an Institute of National Importance, under the Department of Science & Technology, Govt of India, has developed a diagnostic test kit that can confirm COVID 19 in two hours at a low cost.





# Understanding Stress

The outbreak has mounted tremendous pressure

# U



## USING TIME

Too much stress releases the hormone known as cortisol, which impairs human response to immediate surroundings and makes their body susceptible to infections; they are left feeling constantly anxious. The best way to relieve stress is through meditation, it is a tried and tested activity to calm the nerves. The stress can be released through the proper utilization of time.

Pursuing an indoor hobby, games or reading books, etc., could be the best ways to keep yourself engaged.



# Venture

In search of wonder drug and vaccine!



## VACCINATION

To date, there is no vaccine and no specific antiviral medicine to prevent or treat COVID-2019. However, those affected should receive care to relieve symptoms and let it go. People with serious illness should be hospitalized. Most patients recover, thanks to supportive care. Possible vaccines and some specific drug treatments are under investigation. They are being tested through clinical trials.

## VENTILATION

Ventilation is an emergency outlet in healthcare system of any region. Till the vaccine becomes available or the crisis is over, it is important to have secured places with adequate life supporting system for the complicated COVID-19 cases. Since India is maintaining the ratio of less number of complicated cases so far, the medical preparedness seems adequate, though efforts are on to better augment the system with sufficient life support facilities.

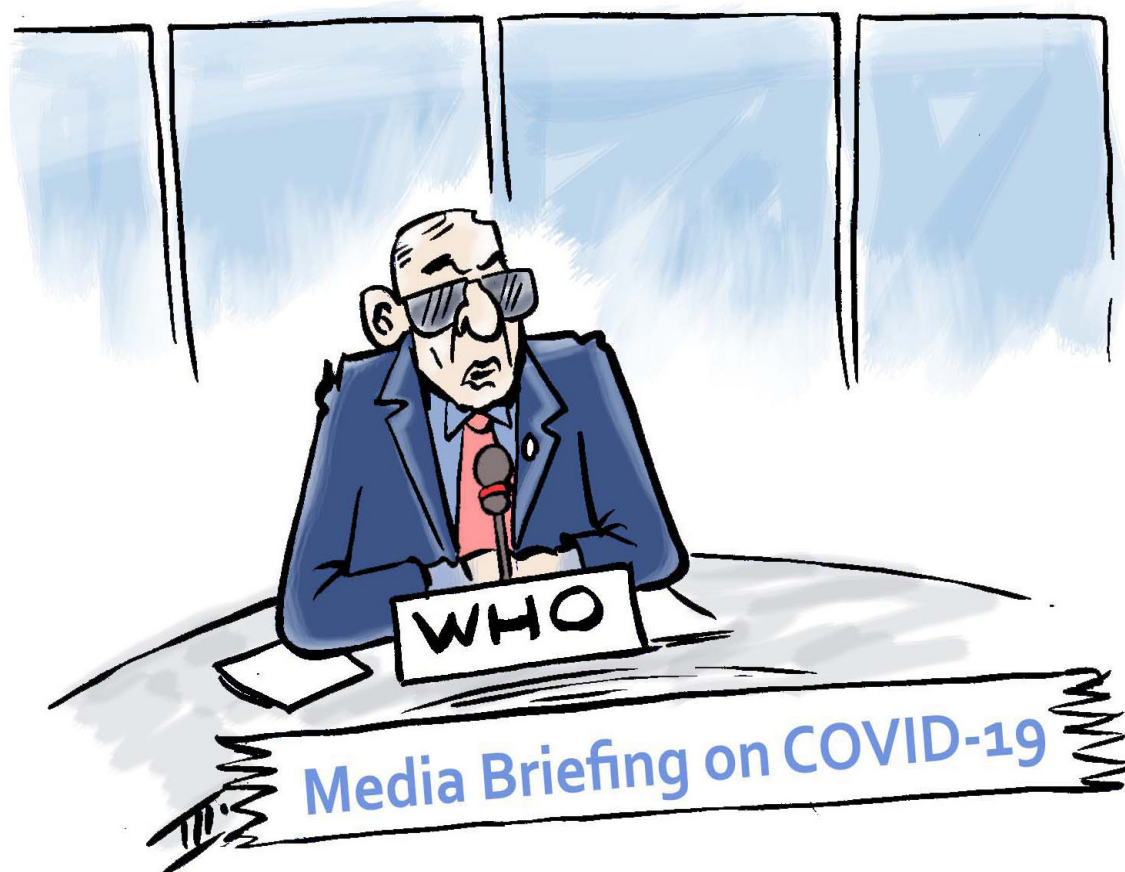
The SERB, DST has already supported initiatives to develop innovative technological and pharmaceutical interventions in this direction.



# WHO for COVID-19

# W

The World Health Organization helps address the pandemic



WHO

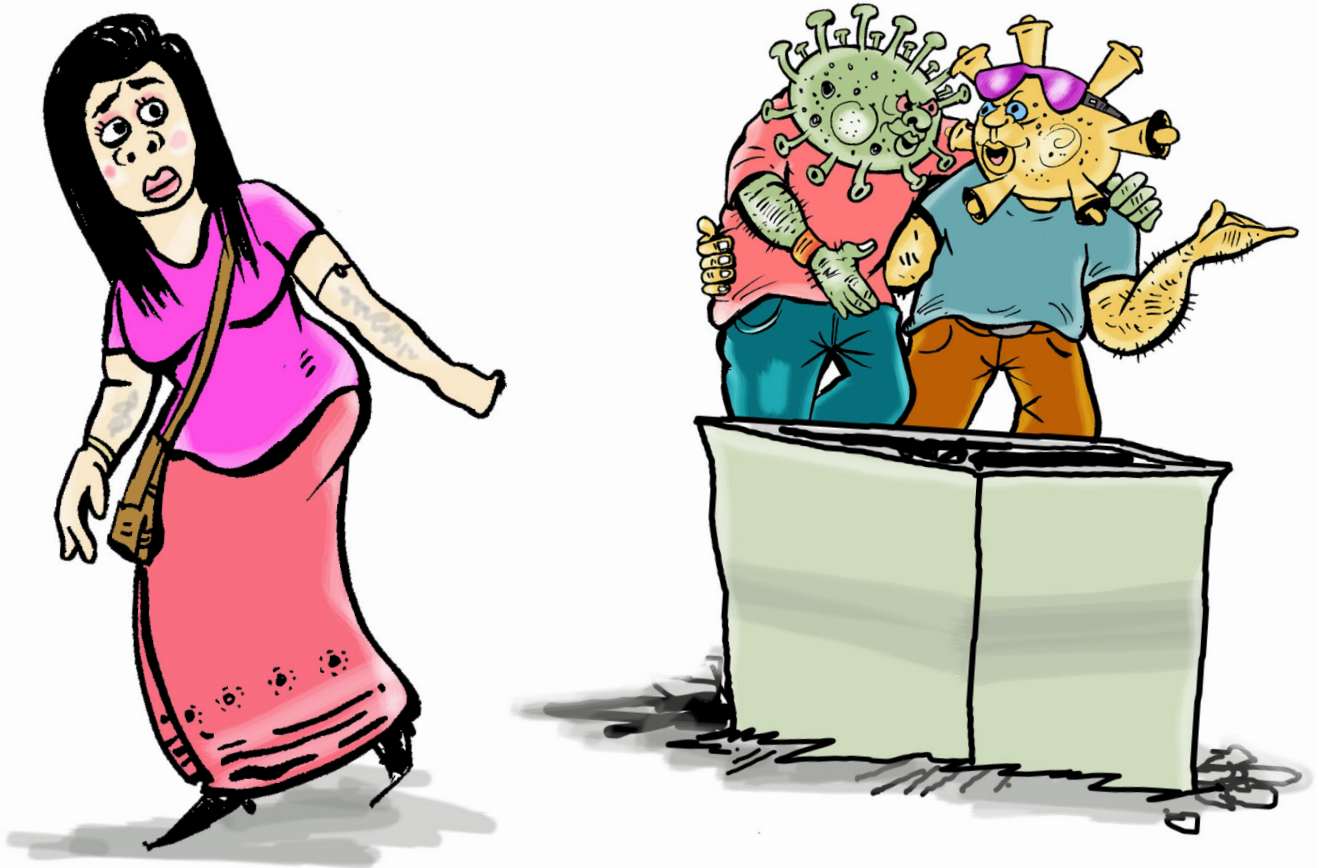
WHO is at the forefront in the fight against the virus globally. It continues to provide updated information as soon as clinical findings become available. The primary role of the WHO is to direct and coordinate international health within the United Nations system. Its main areas of work are health systems; health through the life-course; noncommunicable and communicable diseases; preparedness, surveillance and response; and corporate services. Working with 194 Member States, across six regions, and from more than 150 offices, WHO is responsible for coordinating and sharing timely and accurate information to help overcome the global health crisis.





# Xenodochy

The behavioural and attitudinal changes



## XENOPHOBIA

An increased xenophobia among the people across the globe has been noticed. Most importantly, this xenophobia has been more inclined to certain people. The impact of this oral xenophobia has intensified especially when the world is facing the unprecedented crisis in recent times.



# Yoga and Fitness

Physical and mental energy is a must

# Y



## YOGA FOR STRESS MANAGEMENT

Uncertainty, lack of control, and lack of information, are primary triggers of stress. Due to the coronavirus, social distancing leads to isolation, loss of our daily routines, and less access to some coping strategies, etc. In the time of coronavirus, what can we do to manage stress? Yoga is one stress management tool that we can do at our homes. Unlike some activities, people can practice yoga in a small space with little or no equipment. We can practice on our own, or with guidance.



# Zap

The origin has been traced to animals, though speculations on



## ZOONOTIC

Zoonotic diseases (also known as zoonoses) are caused by germs that spread between animals and people. Coronavirus is supposed to have a zoonotic origin. Animals play an essential role in maintaining zoonotic infections in nature. Zoonoses may be bacterial, viral, or parasitic, or may involve unconventional agents. These germs can cause different types of illnesses in humans and animals, ranging from mild to serious illness and even death. Animals can sometimes appear healthy even when they are carrying germs that can make people sick, depending on the zoonotic disease.





# DOs & DON'Ts

During COVID-19 Outbreak



**A** void gathering  
& crowd



**B** eware of fake  
news and  
misinformation



**C**over the cough  
and sneeze



**G**o to hospital, only  
if advised



**D**ownload Aarogya  
Setu App



**H**ygiene helps



**E**ncourage frontline  
warriors



**I**mmune to get rid  
of infection



**F**ight with patience



**J**oin your hands to  
support govt.



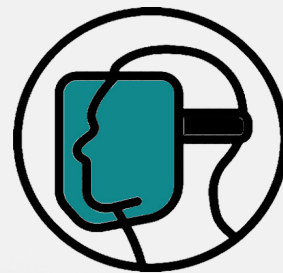
**K**now the symptoms



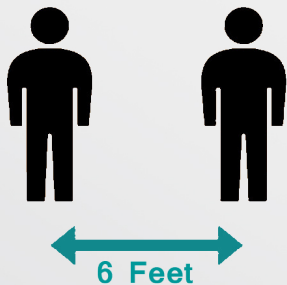
**O**lder people need extra care



**L**ove yourself and family first



**P**rotect your eyes, nose and mouth



**M**aintain at least 6 feet metre distance



**Q**uarantine yourself

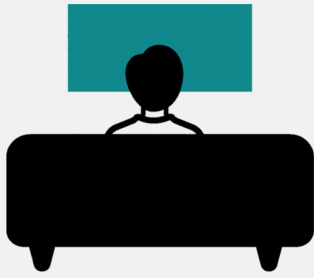


**N**ever visit anyone unnecessarily



**R**educe consumption of alcohol and tobacco





**S**tay at home



**W**ash hands and sanitize it frequently



**T**ravels should be avoided



**X**enophobic attitude does not help



**U**pdate yourself on latest trend



**Y**oga can help



**V**olunteer to help needy



**Z**eal and zest can win over

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# COVID Katha

A Multimedia Guide for Mass Awareness

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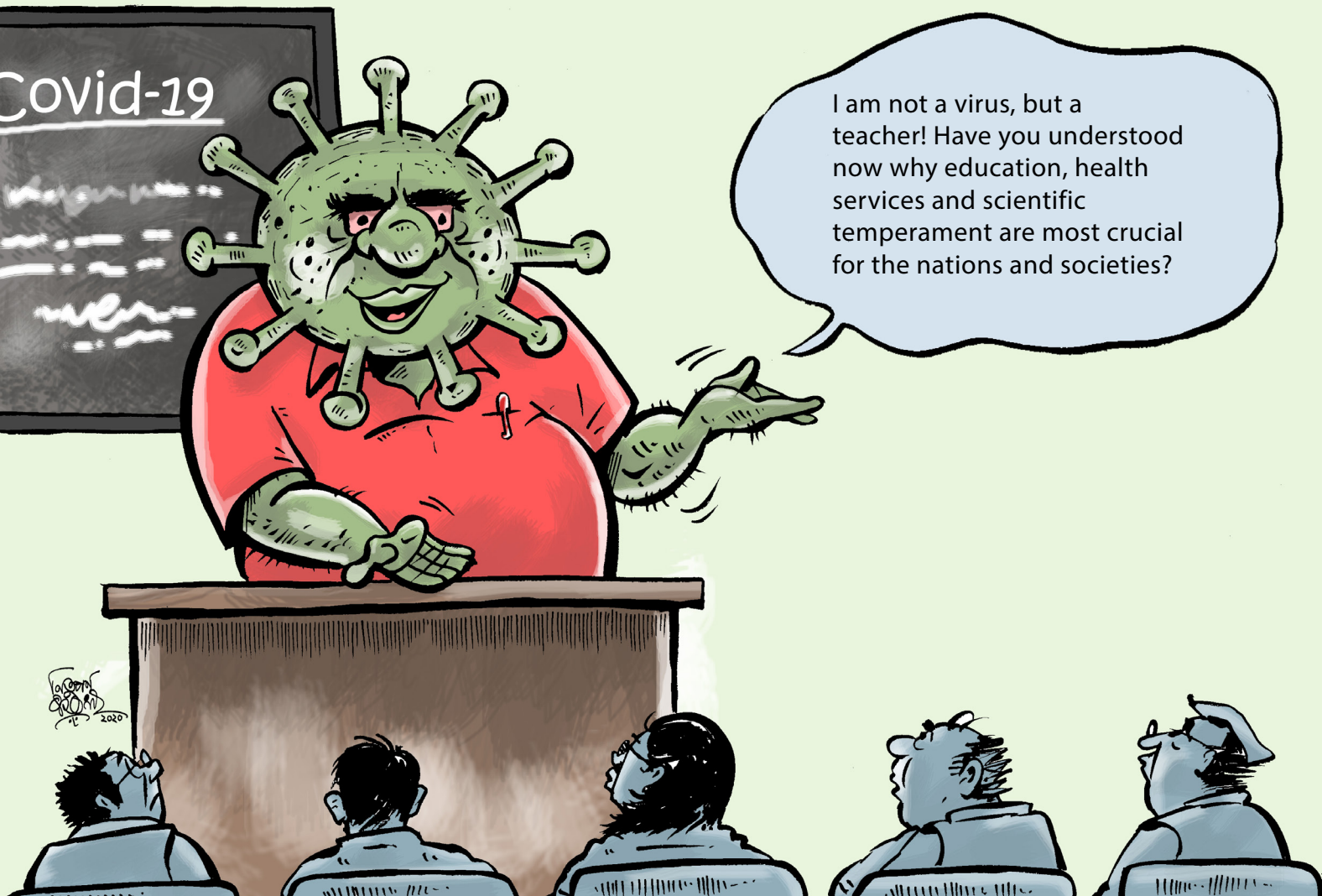
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