

World Stands Together to Fight Corona Virus Disease 2019 (COVID-19)

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Background/History

A pneumonia of unknown cause detected in Wuhan, China was first reported to the World Health Organization (WHO) Country Office in China on 31 December 2019. The outbreak was declared a Public Health Emergency of International Concern (PHEIC) on 30 January 2020. On 11 February 2020, WHO announced a name for the new coronavirus disease: COVID-19. On 11 March 2020 WHO declared it a pandemic. The Corona Virus disease is caused by Novel Corona virus (RNA virus) and is for the first time this type of Corona virus being detected. Ongoing researches have speculated there could be three different strains of this virus, the confirmation will follow in the future. A Chinese Ophthalmologist (Whistle Blower) was the first one to notice and inform that the pattern of the symptoms and signs caused by Corona virus were different and he further emphasized that this must be a new form of Corona virus, something similar to what Chinese people experienced few years ago Severe Acute Respiratory Syndrome (SARS), which took lives of 8000 and more people. Most unfortunate news was this young Ophthalmologist (34 years of age), a glaucoma specialist was the first notable casualty due to Novel Corona virus. Post him various notable personalities across the globe have contracted the disease and have fatal complications. The fatality rate of front-line health workers and doctors who are treating COVID-19 has been high in countries like Italy, United Kingdom and Spain which makes the disease even frightening.

Day wise it took over 67 days to reach the first 100,000 confirmed cases and 12 days to reach the next 100,000 and only 4 days to reach another 100,000 cases. Which itself is a self-explanatory nature of the evolution of COVID-19. Recently, a new protocol to investigate the extent of COVID-19 infection in the population, as determined by positive antibody tests in the general population has been developed. The protocol is titled the Population-based age-stratified sero-epidemiological investigation protocol for COVID-19 virus infection.

As of today, 19 April 2020, COVID-19 has following figures worldwide:

- Total infected cases worldwide: 2,346,819.
- Deaths: 161,097 (21% of total recovered cases of 766,739).
- Recovered: 605,642.

Of the remaining cases 15,80,080 approximately 55 thousand and more are in critical condition (3%) while remaining 97% have milder condition of the disease.

COVID-19 currently has affected 210 Member States worldwide, and in many continents like the America and Africa it is in the peak of its pandemic.

United States of America (USA) alone has 738,923 cases and more than 39 thousand deaths due to COVID-19. 33% of the COVID-19 infected population in the USA is formed by African - American population. In some states, the infected African - American population is as high as 54% (Houston). Overall, 13% of the population of the USA is formed by the African - American population. The reasons behind more African - American population getting infected and having fatal complications should be investigated however, preliminary reports say it is due to comorbid conditions, working on daily wage basis, lack of communication, obesity, comparatively lower socioeconomic status.

The figures of the COVID-19 infection and fatality will keep on changing with each passing day, however this probably is the peak of pandemic of the disease, so one can think of slowing down the infection and fatality rate within next two to four weeks. Few countries like France, Italy, United Kingdom have been reporting similar number of infections and fatalities day wise indicating the pandemicity may have reached a flat curve (Platue) phase. The countries worst hit by this pandemic has been the USA, Italy, Spain, United Kingdom and France with other Member States of Europe following

as well. In Asia, Iran has been hit worst however the impact of the disease has not been the same if you take out figures from China (The epicentre of all) and Iran. Populated countries like India, Indonesia, Bangladesh have been tackling and combating the infection well. While in smaller countries like Bhutan or Nepal in South - Eastern Asia if you take out imported cases local spread has been very very minimal. In the African continent, also the disease did not have the stronger impact as expected with relatively weaker health system in Africa and human resources the disease could have had a huge impact till date.

Virulence of COVID-19

The incubation period is up to 14 days, the symptoms may start as early as within 5 days and few cases have reported to have symptoms in 24 days but it is within 14 days most people will manifest symptoms. The precise reason why quarantine is advocated for 14 days. The virus is highly contagious and has a very rapid evolution, which has caused a great threat to the population. 80% of the infections caused by Novel Corona Virus are mild. However, people with older age group, underlying co-morbid conditions (Diabetes, CVDs, Hypertension), HIV, Tuberculosis, Chronic debilitating diseases, lung pathology, previous history of consolidation in lungs can develop severe illness like acute lower respiratory tract infection and they have high mortality rate. The correlation between smoking and severity of the illness has not been investigated till now as the disease is pandemic and prevention of infection are focussed more now, but it is strictly advised to avoid alcohol and smoking both to make sure the immune system is normal.

Nepal was the only country where no new case was detected for almost two months, the only case this Himalayan Nation had was in January 2020, which was an imported case, the patient recovered and got discharged but after 60 days gap; Nepal confirmed one more case an imported case coming from France. Within next one month period Nepal had 30 cases, of which only 1 case was due to local spread. 14 confirmed cases in Nepal are Indian Citizens. The information highlights the risk of getting COVID-19 when we don't follow the protocols given by WHO. Religious thoughts, beliefs, traditional leaders influence, poverty all played an important role in spread of the disease. India stands at about 16,365 cases and 521 fatalities with deaths per million at 0.4 and cases per million at 12, these numbers are confirmed after testing 372,000 people at risk.

The numbers exactly don't reflect the number of COVID-19 patients specially in lower middle-income countries (LMIC) and developing countries as mass testing has not been carried out in these nations as a nationwide campaign. The figures could be only a tip

of the iceberg, underlying COVID-19 numbers could be very high as many people can only have mild symptoms or asymptomatic and can beat the infection specially in the younger age group population.

Symptoms

Sneezing, cough, shortness of breath, high fever, chills, fatigue, muscle pain, these symptoms depends upon the severity of the disease.

Differential Diagnosis: Other types of Flu, Malaria, Other conditions which give rise to fever with chills.

Transmission types in COVID-19:

- Community transmission is evidenced by the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories).
- Local transmission indicates locations where the source of infection is within the reporting location.
- Imported cases only indicates locations where all cases have been acquired outside the location of reporting.
- Under investigation indicates locations where type of transmission has not been determined for any cases.
- Interrupted transmission indicates locations where interruption of transmission has been demonstrated (details to be determined).

Treatment

There is no specific treatment or vaccine available till date for the infection, all the treatment modalities are focussed to relief the symptoms. There was some argument that use of Ibuprofen during this infection will aggravate the disease condition, this is not been proved yet. There were some articles telling anti retro viral drugs and antimalarial drugs are working in this disease again this is yet to be proved and it may just pertain to some treatment in certain parts of world. Do not panic, 80% cases are mild and will resolve with symptomatic treatment, 15% cases may need hospital admission and specific treatment, 5% cases will need critical care in the hospital. Case fatality rate is low of 2% only as long as you take care of yourself, seek early medical advices and are not in high risk group. European countries have announced that they will start clinical trials for vaccine and oral drugs for the infection

with United Kingdom leading the way, however till now there is no specific treatment available for the disease.

Diagnosis

Symptoms + Test for COVID-19 (If positive then it is a confirmed case, if the test result is negative it is negative), Polymerase chain reaction (PCR) gives the confirmatory diagnosis however an antibody test rapid diagnostic tool kit has been used in mostly communities with contact. Contact tracing and mass testing plays an important role in diagnosing the disease early enough.

Psychosocial problems associated with COVID-19:

- Stress
- Fear of death
- Anxiety
- Psychosis
- Loneliness
- Burn out from work for health workers
- Behavioural changes
- Dangerous behaviour
- Problem with physical health
- Unemployment Business - going in to bankrupting
- Social stigma.

Psychosocial support needed for COVID-19 patients:

- Contact tracing
- Caring - Investigations
- Support
- Speaking out
- Safe environment
- Constant touch with the patient through telephone or social media during self-isolation or quarantine
- Do not panic.

Management of COVID-19 Suspects or patients

Protect yourself and others from getting sick:

Wash your hands

- After coughing or sneezing
- When caring for the sick
- Before, during and after you prepare food
- Before eating
- After toilet use

- When hands are visibly dry
- After handling animals or animal waste.

Reduce your risk of coronavirus infection:

- Frequently clean hands by using alcohol based hand rub or soap and water
- When coughing and sneezing over mouth and nose with flexed elbow or tissue- throw tissue away immediately and wash hands
- Avoid close contact with anyone that has fever and cough
- Social distancing of minimum 1 - 2 meters
- Greet with Namaste, avoid handshakes, hugging or kissing
- Do not involve in gathering of more than 25 people
- Use of mask if you are going near to a suspected case of coronavirus or in crowded areas like cinema, restaurant, airports, hotel, schools etc.
- Avoid use of tobacco and harmful use of alcohol.

Protect others from getting sick:

- When coughing and sneezing cover mouth and nose with flexed elbow or tissue
- Throw tissue in to closed bin immediately after use
- Clean hands with alcohol based hand rub or soap and water after coughing or sneezing and when caring for the sick
- Avoid close contact when you are experiencing cough and fever
- Avoid spitting in public
- If you have fever, cough and difficulty breathing seek medical care early and share previous travel history with your health care provider
- If you develop any symptoms of COVID-19 like disease wear N95 masks or simple surgical masks and seek medical attention urgently, testing is the only way to know COVID-19 status.

Prevention

As outlined above following the WHO guidelines of personal hygiene and protective measures are the main stay of prevention. Breaking the chain of contact transmission by contract tracing, testing and staying at home is major way to break the local spread. Cluster transmission can be fatal to the community and country. It

will be difficult for any member state with even with best of health systems to withstand it, Italy being the prime example of cluster transmission in the communities. The importance of breaking the chain by social distancing and staying at home is thus enormous to save the health systems and lives.

Economy

COVID-19 have had a huge economic impact already. The world bank predicted an increase in GDP of about 3% in the start of the year 2020 for African continent, this has been revised and the World Bank has forecasted African continent will have an overall dent in GDP taking it to -0.8% - 4%. It is expected that 20 million people in Africa will lose job due to COVID-19 pandemic. The scenario would be no different for the rest of the world.

World response to COVID-19

All the countries have been following precautionary measures as advised above. A gathering of more than 25 people have been restricted. Most of the countries have partially or fully locked down the airports. Schools, cinemas, restaurants, churches, mosques, temples have been locked down. Masks, alcohol based sanitizer, drugs for symptomatic treatment, test kits have been manufactured for mass distribution. The world is fighting a war against Novel Corona virus to prevent infection and fatal complications. Together we can do let us not panic and protect ourselves, protect our families, our country and whole world together. As China has shown the world measures like lockdown, social distancing, quarantine and testing are the best way to prevent the disease and facilitate early treatment. The world is following the same, many countries are locking down in a response to COVID-19 pandemic. Now it is our duty to make sure the doctors and frontline health workers stay at the hospital and we stay at home following all the protocols given by the Ministry of Health and the World Health Organization (WHO) [1-4].

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