

# COVID 19: The Way Forward

\* Lekshmy J.<sup>1</sup> and Pallavi Kumar<sup>2</sup>

\*Corresponding Author E-mail: dr.lekshmyj@gmail.com

## Contributors:

<sup>1</sup>Assistant Professor, Shymala Reddy Dental College and Hospital, SGR College Main Road, Munnekolala, Marathahalli, Bengaluru-560037. <sup>2</sup>SPO, National Oral Health Program, National Iodine Deficiency Disease Control Program, National Health Mission, Shimla, Himachal Pradesh-171009

## Abstract

Covid 19, the pandemic is establishing its surge in majority of the world nations including India. Due to its unprecedented nature, humans are all still in a confused state as to how to tackle this situation. This article helps throw some light on the nature of virus, symptoms, precautionary measures to be taken and the response from our respected government advisories. Several investigations are being carried out by various agencies worldwide in search of a cure for Covid 19. Let us join our hands in the fight against this deadly disease.

**Keywords:** Covid, Pandemic, Mask, Quarantine

## 1. INTRODUCTION

World is on a fight against Covid, an invisible enemy. It has been termed as a pandemic with very less scientific material. On 31<sup>st</sup> December 2019, WHO county office in China, Wuhan city, Hubei province was informed case of pneumonia of unknown etiology. On 7<sup>th</sup> Jan 2020, Chinese identified a new strain of corona virus as causative agent. WHO renamed the virus as SARS-Cov 2 and disease condition as Covid 19<sup>1</sup>. On January 30 2020, WHO declares emergence of novel coronavirus a public health emergency of international concern. In India, on 26<sup>th</sup> February 2020, 3 travel related cases (all from china to kerala) were reported. 11<sup>th</sup> March 2020- WHO declares Covid 19 as pandemic<sup>2</sup>. WHO has declared all countries to be prepared for early detection, isolation, containment, including active surveillance, case management, contact tracing and prevention of spread of SARS Cov-2 infection. Groups of cases appeared in Germany, USA, France and local transmission happened in Singapore, Iran, Hong Kong, Republic of Korea & Italy. This article is to provide evidence-based information on Covid 19 and to identify what can be done from each and every one of us to prevent the condition from spreading further.

### 1.1 Epidemiology

Corona virus belongs to a large family of viruses, which causes illness in people and among animals such as camel, cats, bats. Animal corona infection and its spread is rare. Etiologic agent

which causes present outbreak of Sars-Cov-2 is a new strain of corona virus which is closely related to SARS corona virus. In human beings, transmission can occur through respiratory secretions (which can be directly in the form of droplets while coughing or sneezing & indirectly from contaminated objects, surfaces & close contacts)<sup>3</sup>. As of now, estimation of incubation period of Covid ranges from 2-14 days. Most commonly reported symptoms of Corona virus include fatigue, fever, dry cough & breathing difficulty. Upper respiratory symptoms including sore throat, rhinorrhea and gastrointestinal presentations like diarrhoea, nausea, vomiting is also seen in 20% of cases. Due to insufficient scientific literature based on community studies, data as host factor is skewed to cases which require hospitalization. A cohort report analysed by China shows that 81% cases are mild, 14% need hospitalisation & 5% require ventilator & even critical care management. Among the deaths reported, majority include elderly patients, particularly with co-morbidities. Data on origin of infection, what mode is it transmitted, period of infectivity etc is still inadequate and are under investigation. Persons who are testing positive for Covid 19 will be hospitalized until their 2 samples test are negative.

### 1.2 Symptoms

Major presenting symptoms can include fever, chills, myalgia, malaise, and nonproductive

cough, whereas rhinorrhea and sore throat are less frequently seen<sup>4</sup>.

### 1.3 Recommendations on Usage of Mask

Wearing a medical mask is one of the prevention measures to limit spread of respiratory diseases, including Covid 19. But use of a mask alone is insufficient.

The nature of spread of infection led to the recommendation on usage of masks. Health care workers should wear masks, other than that who all needs to/should wear a mask include<sup>7</sup>:

- i) A person with cough or fever, usage of medical 3 layered mask prevents spreading infection to others.
- ii) When visiting health care facility
- iii) When caring for an ill patient
- iv) When close family contacts of suspected /confirmed case are undergoing home care

Medical mask when rightly used, will remain effective for 6-8 hours. If it becomes wet, change immediately. While using the mask, we should avoid touching it. We should not leave the mask to be hanging from neck. If the masks are disposable, they are never to be reused. While removing, we should not touch potentially contaminated outer surface of mask. Masks used by patients, care givers and those in close contacts during home care are to be disinfected using bleach solution, Sodium hypochlorite and then to be deeply buried or to be burnt.

### 1.4 Effective Public Health Measures

Close contact should be strictly avoided with people suffering from acute respiratory infections. Frequent hand washing necessary with soap and water for 40 seconds. Alcohol based sanitizer with 70% alcohol must be used for 20 seconds<sup>5</sup>. Cover nose and mouth with handkerchief/ tissue while coughing/sneezing. If tissue/handkerchief is not available, then cough into flexed elbow. Make sure to dispose the tissue immediately after use and then to wash the hands.

### 1.5 Home Quarantine

Quarantine can be defined as segregation of individual who is not yet ill, but have been exposed to Covid 19 and henceforth has the potential to become ill. This definition differs from isolation, which is the separation of people who have been diagnosed with a contagious disease from people who are not sick; however, the two terms are often used interchangeably, especially in communication with the public. In case of infection also, it will take 2-14 days to show symptoms, so we may not know whether we are infected or not<sup>8</sup>.

In case of travel related/unrelated covid 19 suspected case, rapid isolation in health care facilities and listing of all contacts with the suspected would be done<sup>9</sup>. In case of Covid 19, person living in same house hold should quarantine themselves. Persons in direct physical contact with the case or secretions without PPE (Personal Protective Equipment) should also quarantine themselves. Person in a closed environment or having/had face to face contact with Covid 19 case at a distance of less than 1m including an air travel should quarantine themselves<sup>10</sup>.

Home quarantine person is advised to stay in well ventilated single room preferably with a toilet attached. In case if another family needs to stay, it is advisable to maintain 1metre distance between two. Quarantine person need to be away from elderly, children, pregnant women and people with co-morbidities within household. Need to restrict movement within house. No social/religious gatherings are to be attended.

### 1.6 Social Distancing

Almost all respective governments have passed regulations regarding social distancing. It includes closure of schools, colleges and work places. All people should stay indoors for initial few days period followed by risk assessment. Cancellation of mass gatherings have been advised. People have been directed to avoid public places. Even public transport stands cancelled<sup>11</sup>.

### 1.7 Personal Protective Measures

PPE, N95 mask, gloves, goggles, shoe cover <sup>6</sup>	-Doctors and nurses -Paramedical staff  -Support staff for disinfection and surface cleaning of hospitals
N 95 mask and gloves	-Supervisory doctors for suspect care  -For person collecting samples  -Doctors, Nurses who attends to patients in public health centres
Triple layered Surgical mask	-For field workers who are doing surveillance  -Staff doing essential services  -Suspected cases and bystanders  -Security staff  -Ambulance drivers  -Residents going out for essential services <sup>19,22</sup>

### 1.8 Environmental Sanitation

This includes cleaning and disinfecting frequently touched surfaces in quarantined persons room daily with 1% Sodium hypochlorite solution. Need regular cleaning and disinfecting of toilet surfaces with regular bleach or phenolic disinfectants. Also, clothes and other linen used by person need to be separately cleaned with common household detergent and then dried<sup>13</sup>.

### 1.9 Risk Communication

Materials such as posters and pamphlets, Audio visual films have been used for risk

communication. Interpersonal communication by Asha workers with community has played a major role in awareness among society. Mass communication media such as miking, pamphlet distribution, mass sms, social media, radio, TV for health messages have its own role in this era of social media.

### 1.10 Dedicated Helpline

Helpline numbers have been displayed and publicized in order to provide common population with the information on Covid 19 transmission, what preventive measures to be taken, why to report to health facilities, administrative orders announced and regarding essential services which are available.

### 1.11 Media Management

Concerned authorities have ensured regular addressing of media. Regular press briefing/press release have been made from the part of respective governments. Efforts to dispel misinformation circulating in social media have been carried out.

### 1.12 Clinical Management

With the minimalistic literature data available on management of Covid patients, the treatment line of patients with Severe Acute Respiratory infection (SARI) has already been established. It comprises of the following steps<sup>14</sup>

- Triage: This is a stage of recognising and sorting out patients with SARI
- Immediate implementation of appropriate IPC measures (infection, prevention, control) have to be carried out: including hand hygiene, use of PPE, prevention of sharp injury, safe waste management, cleaning and disinfection of equipment and cleaning of environment
- Early supportive therapy and monitoring: Involves initiating supplemental oxygen therapy, conservative fluid management and use of empirical antimicrobials
- Collection of specimen for lab diagnosis: Specimen collection should be carried out before antimicrobial therapy.
- Management of hypoxemic respiratory failure and ARDS

- f) Management of septic shock
- g) Prevention of complications
- h) Specific antinovel Covid treatment & clinical research: No current evidence from randomized control trials exist for recommending novel anti covid treatment. Unlicensed treatment should be administered only with strict monitoring<sup>15</sup>.
- i) Special consideration to be given for pregnant patients.

## 2. ADVISORY FOR HEALTH INSTITUTIONS

Elective surgeries including dental procedures should be deferred till situation improves. Emergency services shall be continued. At least 30 days medicine to be advised wherever possible to chronic disease patients. Only one attender per indoor patient. Medical and para medical staff are to be advised strictly to follow guidelines of disinfection, treatment, isolation and prevention of covid 19. Medical superintendents of all hospitals are to educate public visiting hospital, through posters and audio-visual addressing systems. General public advised not to go to health institutions for non-medical related works. If at all visit is necessary, safe distancing is advised. Public has been advised not to panic and co-operate on preventive measures widely circulated by authorities and media<sup>23,24</sup>.

### 2.1 Pharmaceutical Intervention

Till dated, approved drug or vaccine for Covid 19 has not been found.

### 2.2 Non-Pharmaceutical Intervention

As there is no proven drug or vaccine, non-pharmaceutical intervention would be mainstay of treatment. Preventive public health measures include social distancing, frequent hand washing & respiratory etiquettes should be advised and followed<sup>25</sup>.

### 2.3 Response from Government

Unprecedented demand on health system due to Covid 19 outbreak has burdened state & central government regarding their best efforts on containment program. National Health Mission

along with Government of India has formulated special financial package titled Covid 19 Emergency response and Health System Preparedness package. The package is intended to help build resilient health systems to support preparedness and prevention related functions that would address not only the current situation but also future outbreaks<sup>26</sup>. It enumerates key activities including screening, testing, community surveillance, establishing treatment and isolation facilities, creating infrastructure and provision supplies for infection control. Allocation of health fund to districts should be based on stage/severity of outbreak.

## 3. CONCLUSIONS

With the evidence available, WHO still continues to recommend droplet and contact precautions for people. Everyone going through this hopefully is capable enough now to make your own assessment as to what appropriate course of action has to be taken using this overview as a guidance. WHO carefully monitors the emerging evidences and trends and update as more information becomes available. Future of Covid 19 is unknown, but for sure if we follow the advises and protocols laid out by the respective responsible authorities, we can pave way for lives of ours and our near and dear ones from this invisible enemy.

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