

**Research Article****Meticulous to Nurses Protection: COVID-19 Pandemic**

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R.Golda Sahaya Rani**Abstract**

COVID-19 is diseases that can origin in a respiratory tract infection. It can sway your upper respiratory tract (sinuses, nose, and throat) or lower respiratory tract (windpipe and lungs). It is caused by a corona virus named SARS-CoV-2. The COVID-19 virus disseminate mainly through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. The spread of COVID-19 virus is initially transmitted between people through respiratory droplets and contact routes. Droplet transmission occurs when a person is in close contact (within 1 m) with any person who has respiratory symptoms (e.g., coughing or sneezing) and is consequently at risk of possess her/his mucosa (oral cavity and nostrils) or conjunctiva (eyes) exposed to initial infective respiratory droplets. Nurse is an essential part of the health care system, encircle the promotion of health, prevention of illness in all health care settings. Nurses are at risk of illness and death, which puts our entire health care system at risk of collapse. Nurses needed guidelines of COVID-19 combines the use of hand hygiene, personal protective equipment (PPE), biomedical waste management, ward disinfection, management of occupational exposure and sterilization of patient-care devices. Nurse's works encompass direct contact with patients. Nurses have high exposure to COVID-19, it is mandatory to establish hospital-specific protocols to reduce the risk of nurse's infection in dealing with COVID-19 patients.

Keywords: Nurses, Covid-19, preventive measures.**Introduction**

A new corona viral disease emerged, which has been termed to as corona virus disease and cropped as "COVID-19".¹ Novel Corona virus is a light on the fact that it is the time seen a change of a creature corona virus first noted in Wuhan, at China last December 2019. Then quickly spread to over 30 countries, It was declared as a worldwide epidemic by the World Health Organization (WHO).² Cases vary from mild

forms to severe ones that can lead to emergency and critical medical conditions even death will occur. It was believed that symptoms may appear in 2 to 2 weeks, as the evolution period for the COVID-19 has not yet been confirmed. As it is COVID-19 specific modes of Spread is not known.³ Corona virus has been increase within persons in contact closely (within 6 feet) via droplets from respiratory system generally, if any infected person coughing or sneezes.⁴ Therefore

widespread use of recommended barrier precautions (such as masks, gloves, gowns, and eye wear) in the care of all patients with respiratory symptoms must be of highest priority. In emergency departments, outpatient offices, homes, and community settings, there will be not diagnosed but infected clients, many of them clinically mild cases or atypical symptoms. There is limited availability of N95 masks, respiratory isolation rooms, and PAPR, particularly in outpatient offices, to feasibly evaluate every patient with respiratory illness such measures are not routinely necessary⁵. During an epidemic outbreak, negative or positive emotions of the nurses interweaved and coexisted. As widespread within hospitals and shielding of nurses are major steps in the pandemic awareness or having enough information regarding sources, clinical features, carrying routes, and preventive measures among nurses can be the part for this goal assessment. Henceforth nurses are in closely contact with infectious people, they are the greater part of the infection spread chain and nurses should have essential knowledge of corona virus about its preventive measures and protection procedures.

Definition of COVID-19

A respiratory illness with mild to moderate symptoms that is caused by COVID 19. *Respiratory syndrome (corona with severe acute stage) is named as virus 2 of the genus beta corona virus*, It affects primarily by contact with infectious material (mainly in respiratory droplets) or with objects or the surfaces were contaminated by the causative corona virus, **(Figure- I)** and is marked particularly by febrile, cough, and shortness of breath and may develop to pneumonia and respiratory failure.⁶

Source of Transmission

The main source of this COVID-19 outbreak has not been determined yet. Illegal connection off bat was suspected to be the origin for entrance of Covid-19 among human. Initial investigations identified positive sample for cases with corona

virus who visited to Seafood and Animal Market at Wuhan City, A zoonotic origin to this epidemic has to identify yet. Because evidence is continuously coming up, fact till date suggests human-to-human spreading⁷. It is an idiopathic cause to occur of COVID-19. Recent knowledge is mainly depending on what is already known about similar corona viruses. Based on what is currently status SARS-CoV-2 and which is known about similar corona viruses as epidemic potential such as MERS and SARS, widespread is take place similarly thro person-to-person in the way of respiratory droplets among close contact then direct or indirect exposure to infectious sources. It was unclear till now that a client will prone to get infection of SARS-CoV-2 if he/she touches any items that has cautiously contaminated and if they touch his/her own oral cavity, eyes or nostrils.^(8,9)

Phases of Pandemic:^(10, 11)

The elucidation of pandemic phases to construct them easier to acknowledge, more specific, and based upon noticeable phenomena.

Phase 1: The lesser level of pandemic aware, phase 1 shows that an influenza-type of viral infection either recently emerged or earlier existing is transmit among animals henceforth the risk of spread were humans was low.

Phase 2: An animal influenza viral infection transmit among domesticated or wild animals was likely to have give rise up corona in humans, and is completely termed as a initial pandemic threat.

Phase 3: It is characterized by small flare-up of disease, normally develop from many cases via animal-to-human spreads, through minimal capacity for human-to-human spread will be present.

Phase 4: It is characterized by predict that human-to-human viral transmission which causes persistent disease in human populations. In 4th phase control of the viral infections is deemed unattainable but a pandemic was not necessarily unavoidable. This accomplishment of control methods to prevents moreover viral transmission was emphasized in affected parts of this universe.

Phase 5: It is noted by human-to-human disease spread into two countries, denoted as a pandemic is threatening it is need of required measures to control the corona virus must be carried out with immediate attention.

Phase 6: This phase is marked by widespread and continuous disease transmission among humans.

When the WHO upgrades the level of a pandemic it distribute as a signal to countries worldwide to turn on any appropriate predetermined disease-control strategies.

Clinical Manifestation of COVID – 19^(12,13,14)

The manifestation are fever, cough, muscle ache, tiredness, pneumonia, complicated breathing difficulty, although less common and the other symptoms are headache, loose stools, rhinitis, bloody mucus, phlegm induced cough. **(Figure: II)** Patients with mild symptoms. In severe cases the patients have the experience of respiratory arrest then virus entered into alveolar complete collapsed. Patient may lead death.

Stages in Clinical includes

- ▶ Mild cases (the complaints are very mild with no pneumonia clinical features can be seen in imaging);
- ▶ Moderate cases (patients have clinical symptoms such as fever and respiratory tract symptoms, etc, and pneumonia manifestations can be viewed in imaging);
- ▶ Severe cases (patients have respiratory distress with respiratory frequency $\geq 30/\text{min}$; pulseoximeter oxygen saturation $\leq 93\%$ at rest; or oxygenation index [artery partial pressure of oxygen/inspired oxygen fraction] ≤ 300 mm Hg)
- ▶ Critical cases (patient have the occurrence of respiratory failure, essential required mechanical ventilation if shock occurs or other organ failures, suggested continuous monitoring followed with treatment in the intensive care unit.

Diagnostic Evaluation: ^(15,16)

Collect blood cultures for bacteria that cause pneumonia and sepsis, ideally before

antimicrobial therapy. Antimicrobial therapy to collect blood cultures **(Figure- III)** Collect specimens of nasopharyngeal and or pharyngeal swab for RT - PCR.LRT (Lower Respiratory Tract) samples when these are readily available (for example, in mechanically ventilated patients). Use appropriate PPE for specimen collection (droplet and contact precautions for URT specimens; airborne precautions for LRT specimens). While collecting URT samples, use viral swabs (sterile Dacron or rayon, not cotton) and viral transport media. Patient with suspected COVID - 19, especially pneumonia as well as severe illness, the single URT sample don't exclude investigation and additional URT and LRT samples are suggested. Sputum induction must avoid it may lead to increased high-risk of increasing aerosol transmission. Patients with confirmed COVID - 19 infection, repeat URT samples should be collected to demonstrate viral clearance. The specimen collection will depend on local circumstances but should be done at least every 2 to 4 days until there are two consecutive negative results (of URT samples) in a clinically recovered patient at least 24 hours apart.

Treatment

The drug Chloroquine is have a long-standing medication treatment for malaria and also the treatment of covid-19. Dosage of the drug chloroquine to treat corona virus patient. It should be administered 500mg orally once or twice daily. Although, optimal dose ``to make sure the protection and efficacy of chloroquine. Ribavirin, a guanine analogue, impute viral RNA-dependent RNA polymerase. Its activity against others CoVs makes it a hopeful for COVID-19 treatment. remdesivir is improve potential therapy for corona patients of its broad-spectrum⁽¹⁷⁾. Corticosteroids were broadly given to the treatment SERS-CoV and MERS-CoV and are also used in the management of the current epidemic of 2019-nCoV. Interferon was the broad-spectrum antiviral, primarily used for treatment SARS-CoV. The WHO has identified that at this present situation not a high level assurance is obtainable,

which approval use of a single specific antiviral agent for the treatment of patients with doubt or verified 2019nCoV infection.⁽¹⁸⁾

Role of Nurse

Nurses are go off into work daily, dedicated to providing high quality care to action this pandemic. Nurses may be entangled in systems plan of action, implementing surge capacity policies, providing triage in emergency room. Examining the people in the long lines at trial sites, educating the community and rest their staff regarding infection control techniques, make sure community health, obtaining personal protective.(Figure- IV) Equipment, protecting and reassuring immunocompromised clients at high risk, and providing tender-hearted required care to patients. Nurses are provides treatments and symptom relief, collecting data in clinical trials, safeguard clients’ safety, and observe vital functions for critically ill patients. Nurses have always stepped up to serve the patients. Patients and society during times of crisis should boost up close. No one on the interdisciplinary team like nurses has the same personal touch and connection to patients.⁽¹⁹⁾ Nurses had a crucial role in giving intensive care and helping with activities of everyday living. The nurses were challenges of working in corona isolation ward. Health-care providers were great challenged to working in a whole new situation, exhaustion due to heavy workloads and shielding gear, the fear of becoming infection and infecting others, feeling powerless to hold patients' conditions, and managing relationships in these exhausting surroundings⁽²⁰⁾. The high-risk of corona virus infection may occur significant psychosocial stress to nursing staff. Henceforth, many young medical staff members infected with COVID-19 whose cases appeared to be mild at the early stage of the disease recently sharply deteriorated and died, further increasing the fear of the virus. To disappear the mental stress of nurses, the in charge nurse has 30-min counseling with nurses who will work in the isolation area on the following day to make them alert of the adequate equipment and

resources of hospital. Nurses are Safeguard and evaluated the first moment they feel any discomfort, nurses with symptoms of anxiety or insomnia are encouraged to seek help from psychotherapists. It will support them deal with potential stress and depression.⁽²¹⁾

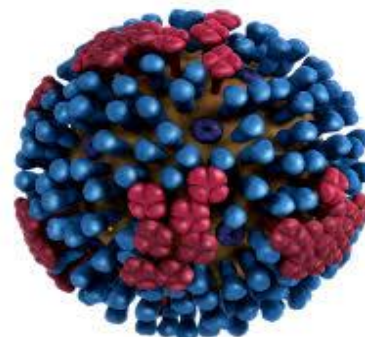


Figure-I Image of Corona Virus Virusvirus

Symptoms of COVID-19

(coronavirus disease 2019)

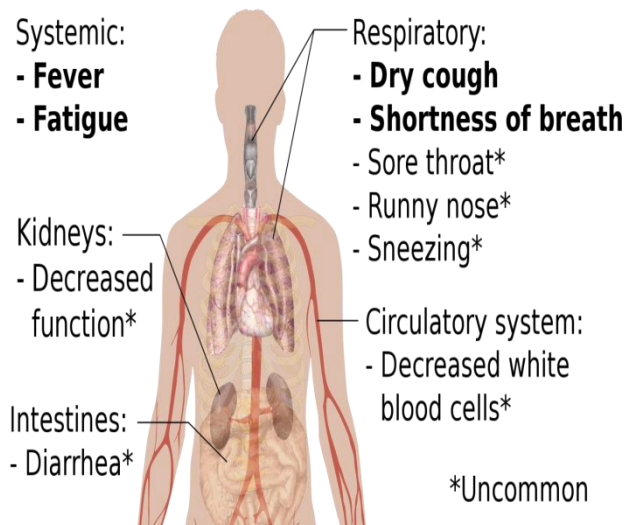


Figure: II Picture Depicts the Clinical Manifestation of COVID-19



Figure: III Diagnostic Evaluation of COVID-19



Figure: IV Picture Reveals Role of Nurse during COVID-19

Conclusion

Corona virus has transmitted from animals to humans cause severe diseases, In COVID 19 was a greater and huge threat to the nursing services. Nurses must work flexible, follow the protocols of their wards and prevent spreading infection to families and public. Nurses are most eminent persons in managing a pandemic crisis covid-19, as well as nurses can perform actively and putting themselves at risk of infection, to provide more effective and efficient care.

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