

Role of Physiotherapy Health Care Professionals in Infection Prevention and Control of COVID -19 – A Pandemic Disease

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Abstract:- COVID-19 is a new pandemic disease which was reported initially at the city of Wuhan in the Hubei province of China on 31 December 2019.¹Recent events have reported its presence in more than 150 countries and with 132758 confirmed cases and a total of 4955 deaths as on 13th March 2020.²Although the death rate due to the disease is 6% or less, the persons who are affected in a short span of time is at an alarming rate.³ In this context, World Health Organization (WHO) have declared the disease as pandemic on 11th March 2020.⁴

I. INTRODUCTION

COVID-19 is caused due to Novel Corona virus. The virus is contagious and is spread through human to human contact as well as through droplet infection from the surroundings. Isolation of affected individuals and contact tracing and quarantine is the first line management of the disease followed by all the countries to prevent the spread. India is considered to be in stage II of the pandemic, which is the stage of local transmission.⁵Adequate hygiene measures and precautions must be adopted by all to prevent the disease from escalating in to a widespread disease. The WHO have demanded a global coordinated effort in order to control further spread of this disease. Medical health professionals who are in direct contact for a longer duration with patients, especially physiotherapists, are at risk in getting affected by this virus than others. It is also noteworthy that Physiotherapists may be the first among the healthcare team who can identify the symptoms of a patient who is affected by this infectious disease as they are often the first contact point of the patient. In this context, they must be responsible in identifying as well as breaking the chain of further spread of the infection in the community. This makes it imperative for the physiotherapists as well as the other frontline healthcare workers to be familiar with the condition of COVID-19 and how to prevent it. This article focus on measures to be adopted by a Physiotherapists in midst of a pandemic attack.

II. GENERAL MEASURES TO PREVENT THE SPREAD OF COVID-19

The Physiotherapy professionals must adhere and use the basic protective gears whenever they are in contact with the patient population. Physiotherapist must perform hand hygiene frequently by handwashing using soap or with an alcohol-based hand rub. They must avoid touching their eyes, nose and mouth unnecessary. Physiotherapist must practice respiratory hygiene to prevent spread of virus in case if they are infected unknown, and also making sure to educate the patients about the same. These measures include coughing or sneezing into a bent elbow or tissue after which it must be immediately disposed. They must wear a medical mask always at workplace, which can be a surgical three ply or N95 mask, and must administer hand hygiene procedure using soap or sanitizer after disposing of the mask. They must be careful to maintain physical distancing for at least a meter from other individuals which includes patients as well as colleagues.

The Physiotherapist must be aware of the disease spread and how to manage the situation. Physiotherapist must share educational messages with patients. Sign boards and educational posters about hand sanitizing methods, when to perform and how, respiratory hygiene, and also to self-identify the risk, which must be displayed at the work area where it is easier for the patients and others to go through it.

Physiotherapist must ensure to avoid unnecessary direct contact with individuals, as it is difficult to identify those who are infected or not at the early stages of the disease. PT must reduce the patient load within the service facility by giving prior appointment through phone calls and telemedicine. They must make sure that the patients who are symptomatic to stay at home. This helps in reducing over-crowding and thus avoiding cross infection within the service facility and outside in the waiting area.

If suspected, the information must be passed on to the local public health specialists taking care of COVID-19 in their locality. They must be vigilant and try to be updated with the information about this outbreak through the WHO updates or through the local and national health authorities. Regular team meetings must be held, by maintaining adequate distancing measures, to review the measures taken within the work area and to update to the latest information in view of patient handling as well as hygiene measures.

➤ *Measures to be taken in an Out Patient Service/Clinic Setting*

Individuals must be asked regarding the following details while making the appointment;

- Recent travel history, especially to areas where infection spread is confirmed in a larger scale.
- Recent contact history with an individual confirmed of COVID-19.
- Recent visits to a hospital which is a designated COVID treatment centre.

If the individual finds positive for the above information, his appointment can be postponed to a later date and can be informed regarding necessary screening and tests to be done, and must guide him to the nearby government facility for the same. If the individual finds negative, appointments must be provided in such a way by preventing over-crowding.

At the reception, the staff must be educated in screening and identifying early symptoms of disease. This includes sore-throat with dry cough, an elevated body temperature, shortness of breath, running nose, sneezing or even specific symptoms such as loss of taste and smell. Direct questioning is required at the reception to identify the patients at risk, who exhibit symptoms as well as having a positive history.

If a patient is found to be at risk, it must be informed to the concerned authorities within the local premises upon the actions to be taken. It must be taken care to isolate the patient away from other patients by treating in separate cabin. Use of personal protective equipment (PPE) and other appropriate measures is indicated. Patient must be provided with tissues, surgical face mask and alcohol hand rub. Patient must be asked to undergo screening at nearby facility if the symptoms persist. Physiotherapists must disinfect the treatment area using 1% hypochlorite solution once the patient leaves the clinic. Electrotherapy equipments must be disinfected using alcohol based solutions after every use.

➤ *Measures to be taken in a Community (Home) Care/Rehab Facility*

Home program must be taught to patient and caregivers and ensure that they routinely administer the same to the patient by taking adequate precautionary measures such as hand hygiene, cleaning the patient environment and isolating patient within their house. Patient as well as the family members must be educated to take care of the safety concerns that arise while isolating at home. Physiotherapist must act as a communication link between the patient and the health authorities. If patient develops symptoms of COVID-19, it is advisable to inform the patient to adhere to home exercise programs by themselves and to consult through telephone or other media if any physiotherapy intervention is necessary.

➤ *Acute care - Intensive Care Unit*

Physiotherapist play a vital role in preventing cardiac and respiratory complications of patients admitted in ICUs with more severe symptoms of COVID -19 like pneumonia, ARDS, Sepsis, septic shock. The responsibilities of Physiotherapist in ICU include to relieve the symptoms and improve cardiorespiratory functions by administering effective physiotherapy interventions like Active cycle of breathing Techniques (ACBT), Chest physiotherapy and Autogenic drainage (AD) to aid sputum expectoration. Deep Breathing Exercises and Pursed lip breathing to ease the load of breathing.

➤ *Safety Measures in ICU*

- Frontline health care personnel must have access to adequate supply of Personal Protective Equipment (PPE).
- It is advised to provide treatment in closed spaces
- If possible, reduce the number of staff at the area of treatment.
- Avoid frequent entry and exit during treatment from within the room.
- Ensure disinfection of treatment areas after any procedure using 1% hypochlorite, and dispose the wastes according to the hospital waste management policy.

➤ *Academic Programs/External Internships*

Measures must be taken to reduce the number of intake of students to the centre to prevent overcrowding. New requests must be postponed till the disease spread is under control. This will allow to reduce the exposure of students to the patient community and also helps in preventing external contact from the community to the inpatients.

III. CONCLUSION

WHO suggest that identification of the infected is of utmost importance to prevent the spread of this pandemic.⁶ Precautionary measures must be adopted by therapists for their own health and well-being and also for their patients.

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