

The role of the physiotherapist in a pandemic situation: a covid-19 outbreak perspective

Muhammad Kashif, Abdulaziz Aoudh Albalwi , Ahmad Abdullah Alharbi,
Farzana Fahad, Irum Ali, Humaira Iram

Department of Physical Therapy, Riphah College of Rehabilitation and Allied Health Sciences,
Abwa Medical College, The University of Faisalabad, University of Tabuk, Saudi Arabia

INTRODUCTION

The current Coronavirus Disease (COVID-19) outbreak has been classified as a global health catastrophe. The number of confirmed cases continue to increase.¹ Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a new coronavirus that appeared in 2019 and causes COVID-19.² COVID-19 is a beta coronavirus that consists of a single-stranded ribonucleic acid (RNA) structure.³ Classic clinical features of COVID-19, including acute respiratory infection (ARI), cough, fever, or a measured temperature $\geq 38^{\circ}\text{C}$, onset within the last ~ 10 days and requiring hospitalization and may require hospitalization.^{4,5} Unfortunately, COVID-19 is not currently under control and the pandemic has become one of the top concerns of our lives affecting the entire globe as well as Pakistan.⁶

Healthcare professionals in this critical situation provide front-line services to COVID-19 patients and hospitalized patients, and are at risk of exposure to infection. Risks include the exposure to pathogens, long working hours, emotional stress, fatigue and occupational stress.⁷ Rehabilitation specialists are identified to care for COVID-19 patients, through tele rehabilitation and physiotherapy out patients services during pandemic.^{7,8} This particular communication provides insight into the physiotherapist's role in physiotherapy management of patients during COVID-19.

PHYSIOTHERAPY OF COVID-19 PATIENTS

Physiotherapists are likely to play a vital role in the functional rehabilitation and respiratory physiotherapy of patients admitted to hospital with

COVID-19, with complications from immobility from prolonged ventilation and sedentary for a prolonged period. Physiotherapists prescribe exercise and assist patients to mobilise.² Stretching and strengthening exercises are required to prevent patients from developing joint stiffness and muscle weakness, which would delay their recovery and discharge home.⁹

PHYSIOTHERAPY THROUGH TELE-REHABILITATION

Telehealth is a rapidly growing technology that is helpful in providing health services in pandemic situations. It is used in neurology, orthopaedics, surgery, cardiology, paediatrics, nursing care, pharmacy and rehabilitation sciences including occupational and physiotherapy. Tele-rehabilitation is in use for both acute and chronic conditions includes musculoskeletal and neurological conditions, spine conditions and chronic pain.¹⁰ National physiotherapy associations have published recommendations for providing physiotherapy through telemedicine.¹¹

This virtual platform could be used by smartphones or webcam-enabled computers and allows physicians and other health care workers to effectively screen patients with early signs of COVID-19 before they reach to hospital. As a result, this could lead to a substantial decline in unnecessary patients visit, promoting self-quarantine and reducing emergency department overuse. Moreover, this provides remote monitoring of recently discharged patients, and helps reduce the risk of clinicians' exposure to infections.¹²

There are also limitations to the use of telehealth. Some consultations require physical examinations

that may be difficult to perform remotely like auscultation and diagnostic imaging and cultures. These situations also highlight the importance of providing care via telehealth to non-infected people during an infectious pandemic. This can reduce contamination when it is necessary to see an infected patient in-person.¹³

OUTPATIENT PHYSIOTHERAPY SERVICES MANAGEMENT

The concept of triage and early detection means that the physiotherapist should assess the urgency of the treatment and postpone non-urgent appointments.¹¹ The patient should be asked if he/she has been in COVID 19 outbreak area, if the patient had signs or symptoms of an acute infection, e.g. Fever, cough, sore throat, etc., or if he has had contact with a person who has any signs or symptoms of such an infection in the past 14 days. If COVID-19 is suspected, the national COVID-19 administrative rules (report, quarantine) must be followed and treatment stopped immediately. The planning of the first visit of patient should be done by phone.

In order to meet the legal standard requirements recommended by the WHO and the World Confederation of Physical Therapy, the treatment rooms, the waiting rooms and the sanitary facilities, adjustments may have to be made. A separate waiting room with a disinfection clamp is required. Information posters about the correct use of sanitizer for patients and visitors should be displayed. Hand and breathing hygiene, no handshakes and one meter distance wherever possible should be adopted.¹⁴ The treatment room should have proper ventilation and structurally separate from other room with other facilities like sink, a soap holder and a disinfectant. The therapeutic modalities should be kept to a minimum as they have to be disinfected after use.

WHO recommends that Health care workers including physical therapists, wear personal protective equipment. Due to possible surface contamination, electronic payment should be preferred and cash payment should be avoided. Signs and symptoms of infection should be

excluded and documented at the beginning of each follow-up appointment.

CONCLUSION

The rehabilitation therapy teams should strictly adhere to the guidelines of the local authorities, hospitals, the government and the WHO, the WCPT and the physiotherapy associations and, of course, support each other to maintain morale.

Author Contributions:

Conception and Design: Muhammad Kashif
Collection and Assembly of data: Abdulaziz Aoudh Albalwi
Drafting of the article: Ahmed Abdullah Alharbi
Critical revision of the article for important intellectual content: Farzana Fahad
Final approval and guarantor of the article: Muhammad Kashif, Irum Ali

Corresponding author email: Muhammad Kashif:

kashif.shaffi@gmail.com

Conflict of Interest: None declared

Rec. Date: Aug 21, 2020 Revision Rec. Date: Apr 13, 2021 Accept Date:

REFERENCES

1. See the Realtime Pakistan and Worldwide COVID-19 situation Pakistan: Government of Pakistan; 2020 [cited 2020 April 31].
2. Thomas P, Baldwin C, Bissett B, Boden I, Gosselink R, Granger CL, et al. Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. *J Physiother.* 2020;66:73-82.
3. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *Int J Surg* 2020;76:71-76.
4. He F, Deng Y, Li W. Coronavirus disease 2019: What we know? *J Med Virol* 2020;92:719-25.
5. Tu H, Tu S, Gao S, Shao A, Sheng J. The epidemiological and clinical features of COVID-19 and lessons from this global infectious public health event. *J Infect* 2020;81:1-9.
6. Ul Haq S, Shahbaz P, Boz I. Knowledge, behavior and precautionary measures related to COVID-19 pandemic among the general public of Punjab province, Pakistan. *J Infect Dev Ctries* 2020;14:823-35.
7. Nguyen LH, Drew DA, Graham MS, Joshi AD, Guo C-G, Ma W, et al. Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *Lancet Public Health* 2020;5:e475-e83.
8. Turolla A, Rossetini G, Viceconti A, Palese A, Geri T. Musculoskeletal physical therapy during the COVID-19 pandemic: is telerehabilitation the answer? *Phys Ther* 2020;100:1260-4.
9. Bach JR, Kang S-W. Disorders of ventilation: weakness,

- stiffness, and mobilization. *Chest* 2000;117:301-3.
10. Tenforde AS, Hefner JE, Kodish-Wachs JE, Iaccarino MA, Paganoni S. Telehealth in physical medicine and rehabilitation: a narrative review. *PM&R* 2017;9:S51-S8.
11. Haines KJ, Berney S. Physiotherapists during COVID-19: usual business, in unusual times. *J Physiother* 2020;66:67-9.
12. Moazzami B, Razavi-Khorasani N, Moghadam AD, Farokhi E, Rezaei N. COVID-19 and Telemedicine: Immediate action required for maintaining healthcare providers well-being. *J Clin Virol* 2020:104345.
13. Smith AC, Thomas E, Snoswell CL, Haydon H, Mehrotra A, Clemensen J, et al. Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *J Telemed Telecare* 2020: 1357633X20916567.
14. Cirrincione L, Plescia F, Ledda C, Rapisarda V, Martorana D, Moldovan RE, et al. COVID-19 pandemic: prevention and protection measures to be adopted at the workplace. *Sustainability* 2020;12:360-3.