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Occupational Therapy Department's Engagement in the Organizational Management of Coronavirus Disease-2019 Pandemic in an Acute Care Setup: Perspective from a Clinical and Administrative Experience and a Narrative Review

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Abstract

Background: Coronavirus disease-2019 (COVID-19) pandemic came as a big challenge to the medical fraternity. The novelty of its manifestation made it clear that occupational therapy (OT) professionals would require to adapt to the ever-changing scenario of the pandemic and engage in newer roles to combat the pandemic. **Objective:** The objective of the study was to provide descriptive narration of the process of engagement of the OT department in handling the COVID-19 pandemic at an acute care setup. **Study Design:** A perspective from a clinical experience and a narrative review. **Methods:** Narrative account of the initiatives, challenges, preparations, and outcomes of the measures taken by the King Edward VII Memorial Hospital's (KEMH) OT Department's professionals as part of a multidisciplinary team member in combating the COVID-19 pandemic is reported. The occupational therapist at KEMH used core OT principles and teachings in treatment sessions and managerial functions to aid patients and the organization during the pandemic. **Results:** The measures taken by the OT department professionals at KEMH helped facilitate the management of the COVID-19 pandemic at the hospital. Being well-versed with the organization's style of functioning and philosophy enabled the OT department to work as part of a multidisciplinary team. The active participation of occupational therapists underlined their role in acute respiratory conditions. It helped OT be a part of the critical management of COVID-19 patients admitted in the hospital and at the Jumbo care centers developed by the hospital team of experts. **Conclusion:** The COVID-19 pandemic allowed OT professionals to create new processes and enhance service delivery through innovative actions in an acute care setup.

Key Words: COVID-19, Occupational Therapy, Organizational Role, Pandemic, Tertiary Care Hospital

INTRODUCTION

The first case of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was reported in the Wuhan city of China in December 2019.^[1] In India, the first case of confirmed coronavirus disease 2019 (COVID-19) was detected in Kerala state in January 2020.^[2] COVID-19 surprised the world with its suddenness and rapid pace of spread and on March 11, 2020, World Health Organization declared COVID-19 as a pandemic.^[3]

Working in an acute care setup of King Edward VII Memorial Hospital (KEMH), which was at the frontline of COVID-19 management, posed many challenges to the occupational therapy (OT) department.

During the initial stages of the pandemic, there were no clear guidelines about OT management of COVID-19. There was uncertainty amongst the medical fraternity about OT's role in the management of COVID-19 patients. OT professionals faced the added challenge of establishing a role in the acute stages of the disease. There was anxiety, not only amongst the

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general public but also among occupational therapists (OTs). The numbers of COVID-19 infected patients kept rising, and the sheer scale of the pandemic burdened the administration. Seth Gordhandas Sunderdas Medical College and KEMH, a premier education institution and super-specialty hospital under Municipal Corporation in the 7th globally ranked highly populated city of Mumbai, in the state of Maharashtra, India, had to devise newer plans to combat the pandemic.^[4] All the departments of the hospital were part of the response plan, including OT.

Due to the novelty of the disease, soon it was clear that OTs would need to step out of their traditional roles and help facilitate the management during the pandemic. Over time, guidelines published by various OT agencies helped streamline OT services for COVID-19.

As we learned about COVID-19, we could create specific OT intervention plans for COVID-19 in an acute care setup.

The purpose of this paper is to report the perspective of clinical and administrative experiences of how OT services in an acute care hospital evolved during the COVID-19 pandemic. The present article is about challenges, reflections, adaptations, and the preparedness undertaken by OT personnel to aid in the management of COVID-19 patients. Our institutional perspective is supported by a narrative review of the recently published literature on the COVID-19 pandemic.

METHODS

KEMH, a tertiary care hospital, situated in Mumbai city of Maharashtra state in India, is an 1800-bedded health-care facility under Brihanmumbai Municipal Corporation (BMC) that provides outpatient department care, in-patient (IP) services, intensive care unit (ICU) services, surgical, and rehabilitation services to patients from across India. It caters to around 10 lakh patients per month.

After the outbreak of COVID-19, along with other measures, the hospital reduced non-essential services, created specialty COVID wards and ICUs, conducted training for all hospital staff regarding COVID-19, disseminated updated scientific information, and formed committees for the management of essentials and patient care. The Municipal Corporation management appealed to all essential workers to join back duty and provided several facilities such as free public transport and extra daily allowances. Every department was expected to contribute in their conventional and nonconventional roles. OT adapted itself to participate in all hospital services, which were available for patients with COVID-19. OT professional's initial response was based on OT knowledge of disaster management.^[5,6]

As the pandemic progressed, the following guidelines were used for developing OT intervention in the COVID-19 pandemic at KEMH:

1. OT guidelines and recommendations for adults hospitalized with COVID-19 in acute setting.^[7]
2. OT intervention in COVID-19, WFOT^[8]
3. The new normal: An OT guide^[9]
4. Health policy perspectives-lessons learned from the COVID-19 pandemic: OT on the front line^[10]
5. Guidelines for OT and further recommendations for renewing guidelines.^[11]

Occupational Therapy Engagement

All the OT department professionals underwent training sessions conducted by the department of microbiology on sanitization protocols, isolation protocols, and donning-doffing of personal protective equipment (PPE) kits. The department regularly updated itself with the standard operating procedures issued by the authorities. The perspective of our clinical and administrative experience is reported herewith, adhering to the principles of the Declaration of Helsinki 2013 guidelines. The perspective report is also approved by the in-charge of OT training school for publication.

The OT department engaged in various duties and committees of the hospital to manage the COVID-19 pandemic.

Management of COVID-19 and Non-COVID-19 Patients

The inpatient and outpatient sections of OT functioned throughout the lockdown and ongoing pandemic, adhering to all rules of social distancing, masking, and regular sanitization of the patient areas. Patients with and without COVID were given OT interventions accordingly.

Occupational Therapy in Mental Health

As the essential services were constantly under the need of its employees, the administration had revoked all long leaves of its employees and had ordered them to report at their respective areas of work with appropriate fitness certification. The psychiatry section of OT received more than 20 clients a day for work fitness evaluation. The clients were assessed using comprehensive OT evaluation and simulated work activities. Clients were observed for general, interpersonal, and task behavior. The majority of the clients had apprehensions about joining back duties due to the pandemic. OT intervention for return to work comprised of: Discussions and education about COVID-19 and its spread

- Role-play about COVID-19 appropriate behavior at the workplace
- Stress and anxiety management using OT based on cognitive behavioral therapy and relaxation techniques
- Breathing exercises for improving endurance
- Enhancement of social skills using social distancing.

Tele Therapy

Due to the pandemic and lockdown, patients residing at far-off places faced difficulties receiving OT services. Wherever possible, OT services were rendered using teletherapy through voice calls, WhatsApp videos, zoom, and Google meet.

In the hand therapy section, five occupational therapists provided rehabilitation to 36 postoperative hand injured patients from April 2020 to Oct 2020. The teletherapy services helped therapists continue services to their patients and helped

avoid patients' risk of exposure to high-risk areas and receive therapy in their home setup.

Triage Coordination

The hospital set up an emergency triage area and a triage coordination committee (TCC) comprising senior faculty members from various specialties. The primary function of the TCC was to make sure that noncritical COVID-19 positive patients were accommodated at the nearest available treatment facility and to de-clutter KEMH so that ICU beds in KEMH were made available to severe cases. Senior OT faculty was part of the triage committee. Patients coming to KEMH were admitted to different COVID-19 facilities developed by BMC depending on their severity [Table 1].

Duties of the Triage Coordination Committee

1. To take details of COVID-19 positive patients from emergency triage, make a checklist of symptoms, RTPCR test, X-ray chest, SPO2 level, and comorbidities
2. Depending on the clinical status of the patient, to coordinate bed vacancy/allotment by coordinating with the in-charges of the above facilities
3. To arrange for COVID-19 ambulance through regional ward office or COVID-19 helpline no-1916 to transfer patients to allotted health-care centers

The TCC worked with emergency triage 24 h a day till the COVID-19 positive patient reached the required facility.

Severe Acute Respiratory Infection Ward Coordination

At KEM hospital's casualty section, three occupational therapists were assigned as coordinators for severe acute respiratory infection (SARI) ward. Their role was to decongest the SARI ward as per the diagnosis and COVID-19 status of the patients. To carry out this assigned duty, they had to confirm the bed availability in every ward per hour and coordinate their COVID-19 reports before being transferred. Their role also included updating the respective ward in-charges of the oxygen status of the patients before shifting/transferring them to COVID-19/non-COVID-19 wards. They also coordinated the logistics needed to transfer the patient.

Table 1: Allocation of Corona Virus Disease-2019 Positive Patients to Various Facilities through Triage Coordination Committee

The severity of COVID-19 infection	Facility
Asymptomatic and mildly symptomatic patients below the age of 60 years	CCC
Patients with mild to moderate symptoms with comorbidities	DCHC have an oxygen supply facility
Patients with moderate to severe symptoms and with co-morbidities	DCH/SARI/ICU wards
Health care workers	Dedicated COVID facilities

COVID: Corona virus disease, CCC: COVID care centre, DCHC: Dedicated COVID health centers, DCH: Dedicated COVID hospitals, SARI: Severe acute respiratory infection, ICU: Intensive care unit

Helpline Services for Employees

Health-care workers (HCWs) had been at maximum risk of developing the disease since the beginning of the COVID-19 pandemic. They worked relentlessly during the pandemic in COVID-19 wards and other COVID-19 jumbo care facilities.

They had to share public facilities such as washrooms, transport systems, and residential areas, thereby increasing their risk of infection. There was anxiety and apprehension among them and their families given their COVID-19 duties. In collaboration with the community medicine department, OT department addressed these concerns of the health-care workers by creating a counseling helpline-7259 for HCW of KEMH.

The project was conducted for over 6 months in 2020.

Logistics Duty

Many specialty wards in KEMH were converted into COVID-19 wards and required high levels of logistic management. The logistic duty included distributing PPEs' to COVID-19 wards, collecting RTPCR reports and death summaries, updating bed availability, inspecting medical equipment in COVID wards, and maintaining ICMR forms and discharge forms. Occupational therapists worked for logistic duties in 12-hour shifts in rotation along with postgraduate students.

Oxygen Monitoring Duty

During the second wave of COVID-19, the hospital infrastructure was overwhelmed, and oxygen shortage was a major concern.

At KEMH, occupational therapists were a part of the O₂ monitoring committee to ensure optimal use of oxygen.

The occupational therapists went to COVID-19 wards using personal protection gears and monitored any discrepancies in O₂ prescribed and O₂ provided.

The duty also involved coordinating with the on-duty medical personnel and getting the O₂ meter level adjusted as per requirement, preventing unnecessary wastage of oxygen.

Preparation of Pamphlets for Distribution at the Vaccination Center

The vaccination drive in India for the COVID-19 pandemic began in January 2021. The vaccination center at KEMH started receiving huge crowds for vaccination. OT department identified the need for mass education and sensitization about the need for rehabilitation and general health maintenance as part of its prevention program. In collaboration with the community medicine department of KEMH and through the patient education fund, occupational therapists' made attractive pamphlets in Marathi, English, and Hindi languages. These pamphlets focused on stress management techniques, breathing exercises to improve endurance and vital capacity, Information about correct postures to be followed while practicing work from home, and special parenting tips during the pandemic.

The pamphlets were initially distributed amongst a few laypersons to understand the clarity of information they could understand and retain from the pamphlets.

As per the feedback received, the pamphlets were rectified to make maximum impact with additional graphic pictures.

Video Making

Patient and caretaker education was a real challenge during the pandemic. Before COVID-19 pandemic, therapy strategies were discussed and demonstrated to patients and caregivers. However, with the advent of COVID-19 appropriate behavior, sharing information with clients became challenging. Videos were recorded through KEMH Regional Resource Centre (RRC) on common strategies like joint protection techniques, work simplification techniques, back care, and OT for children with cerebral palsy. The videos were shared on social media platforms through National Medical College Network. The videos became an integral part of patient education.

Academics

The COVID-19 pandemic and the resulting lockdown affected the academic pursuit of OT students. Teaching was continued using online methods. Innovative methods were used like video making and sharing, scenario-based assignments, and role play.

The methodology of dissertations of postgraduate OT students was modified due to the unavailability of the physical presence of patients. Ethics approval and approval from the university were obtained to help students complete their dissertations using online methods.

NESCO-2 Jumbo COVID Center

By 2020, many patients with post-COVID-19 complications were referred to OT for rehabilitation. Hence realizing the need for early intervention, the OT department gained permission from the municipal authorities to render O. T services at NESCO jumbo COVID hospital phase-2, Goregaon, Mumbai, located at a distance of around 20 kilometers from KEMH and managed by KEMH. While the jumbo COVID hospital was coming up, OT department utilized the time to prepare for the new responsibility by taking various steps.

Steps Undertaken

1. A senior OT faculty was assigned to develop and coordinate the program. Postgraduate students were involved in preparing an OT program for COVID-19 patients based on evidence.
2. A power-point presentation was presented to the dean of Jumbo COVID Centre about the role of OT.
3. As part of resource personnel development, lectures were arranged on topics like COVID-19 management and donning–doffing PPE for OT staff and postgraduate students.
4. A 6-point occupation-focused OT program was developed comprising of:
 - i. Patient education
 - ii. Energy conservation techniques
 - iii. Pulmonary rehabilitation focusing on breathing exercises and positioning.
 - iv. Stress and anxiety management

- v. Fatigue management
 - vi. Vocational counseling.
5. Occupational profile of each patient was documented. OT evaluation pro forma was developed, and specific scales were used for pre- and post-assessments of admitted COVID-19 patients such as Perceived Stress Scale and Modified Borg Dyspnea Scale, etc.
 6. Equipments were procured for OT management.
 7. Comprehensive programs were implemented for patients' physical, mental, and emotional health during the hospital stay and after discharge. Individual and group therapy focused on preparing patients to return to their original role and work at home and in society. Electronic tablets were used for patient education and stress management.
 8. Before discharge, each patient was counseled about managing post-COVID-19 complications and resuming work. Power-point presentations of their specific work management were shared through WhatsApp.

Preparation for COVID-19 in Pediatric Population at NESCO

In view of the anticipated affectation of children in the third wave of COVID-19, preparations were undertaken at NESCO-2 Jumbo COVID Centre. Instead of “Paediatric ward,” these child-parent units were named as “Family wards.” Activities that would be therapeutic and engaging for the children were procured. Individual and group participation activities like carrom, cricket, football, storybooks, and drawing material were procured.

A comprehensive program using OT frames of reference and play therapy was planned based on various research articles and studies. Emphasis was on maintaining their daily routines, interests, and day-to-day activities.

Parents of the admitted children were to receive counseling regarding how to take care of themselves while managing their admitted children, how to alleviate stress and anxiety of isolation and how to take care of the child was planned. A set of exercises for general well-being was planned.

RESULTS

1. Attending training sessions organized by the hospital regarding COVID-19 protocols helped the OT department personnel to be equipped with the latest evidence for OT engagement in COVID-19
2. OT intervention continued for inpatient and outpatient patients with and without COVID-19 infection throughout the pandemic. This helped the patients in their recovery towards functional independence
3. The psychiatric section of OT assessed the work fitness of BMC staff members for return to work and also provided intervention to alleviate fear and stress about the pandemic. Due to this, many workers were able to resume back duties and provide their valuable services
4. OT intervention using teletherapy was provided to patients who could not come to the department due to

- lockdown. This helped the occupational therapists to better understand the environmental context of the patients
5. OT department staff members working in the TRIAGE committee helped to facilitate the accommodation of COVID-19-infected patients to their nearest center, depending on their severity
 6. Working as SARI ward coordinators, helped the occupational therapists to coordinate the medical management of the patients
 7. Counseling through helpline services helped the HCWs to alleviate their anxiety
 8. Occupational therapists performing logistic duties for management of COVID-19 in the hospital helped in streamlining the services
 9. Working with the occupational therapists in the Oxygen monitoring committee, helped in optimizing the use of oxygen in wards
 10. Preparation and distribution of informative pamphlets regarding COVID-19 and videos of OT intervention in different conditions helped spread awareness among the citizens
 11. Innovative methods developed by OT teachers helped in continuing the academic pursuits of OT graduate and postgraduate students
 12. Several months of OT engagement in the hospital management of COVID-19 resulted in OT being an important part at the NESCO-2 Jumbo COVID Centre. The specialized occupation based OT program implemented at the jumbo COVID centre helped many patients infected with COVID-19 to improve their physical and psychosocial components affected due to COVID-19 infection and prepared them for return to work
 13. The OT department made preparations at the NESCO-2 Jumbo COVID center for the estimated COVID-19 infection affecting the pediatric population in the next wave.

DISCUSSION

COVID-19 disrupted the lives and functioning of people. Occupational therapists, too, did not escape this disruption. They had to adapt to the changing scenario. The initial phase of the pandemic was focused on providing medical care to the infected and preventing mortality. Whereas the physicians were busy attending medical emergencies, OT professionals and other health-care professionals readily took over the duties of coordination, administration, and management of the distribution of essentials.

“As occupational therapists, we are so versatile that we can see a complete picture. We don many hats and are excellent at evaluation, problem-solving, and implementation of plans,” said Laura Grogan, OTR, LCDR, of the U. S. Public Health Service.^[12]

During the acute pandemic stage, occupational therapists attending the COVID-19 and non-COVID-19 patients had

to overcome their own inhibitions, fear, and anxiety about getting infected. Although the therapists followed all protective precautions such as wearing PPE kits while attending patients, the fear of infecting their near and dear ones on returning home loomed large over them. Many therapists had young children, old parents, or in-laws at their homes. They felt guilty for putting their family members at risk. Talking with co-professionals, keeping themselves updated about the latest treatment developments, and practicing relaxation techniques helped the therapists.

The occupational therapists working in mental health played a significant role in evaluating health workers for fitness and bringing them into the much-needed frontline of COVID-19 services. As employers return to work, it is essential to keep the mental health of employees in mind. V. E. Brown stated that employers that want to create a smooth transition as employees return to work would need to address the mental health of their employees and take affirmative action.^[13]

The teletherapy services helped therapists continue services to their patients and helped to avoid patients’ risk of exposure to high-risk areas and get rehabilitation in their home setup. Getting virtual access to the patient’s physical environment gave the therapists a better opportunity to include environmental factors in their intervention.

As part of the triage committee, the occupational therapists effectively used their communication skills to answer the queries raised by patients, tactfully giving them constructive feedback and reducing their stress. Critical thinking competencies were used to make time-sensitive decisions while rendering adequate emotional support to the patients and their families. In a study related to establishing obstetric services during COVID-19 at a tertiary care hospital in Mumbai, the authors concluded that a sustainable model could be established using a multidisciplinary approach and active engagement of a multispecialty team.^[14]

The helpline services became a huge success as they involved contactless delivery of information to its recipients. It also reduced the burden on contact tracing systems and COVID-19 report collection centers of the hospital, as all the necessary guidelines were conveyed to HCW over telephonic communication. The recipients were interviewed briefly by occupational therapists, and their details were recorded for future reference. It was noted that social distancing and social isolation greatly impacted health care workers’ need to socialize and communicate.

In logistic duties, managerial skills developed by occupational therapists were adequately applied in the inventory listing, maintaining files and records, arranging follow-up sessions, and smooth discharge from the hospital.

Acute shortage of oxygen made it necessary to prevent any oxygen wastage. Occupational therapists from KEMH worked diligently in the hospital’s oxygen monitoring committee and saved a large quantity of oxygen.

The pamphlets distributed at the vaccination center during the second wave of COVID-19 allowed the occupational therapists to reach local people to prevent the spread of infection and maintain health. As per verbal feedback received from the vaccination center, the general population received the pamphlets well due to their practical tips and pictorial presentation. To prevent the ill effects of isolation, the OT department maximized its efforts to help maintain healthy interpersonal relations despite social distancing norms.

Videos made by the department were distributed extensively using social media. The simple language and pictorials used in the videos helped the layperson understand health-related concepts.

Being an academic center posed many difficulties to the OT department. Innovative ideas used by the department helped the students to continue with their academics and appear for their university exams.

Working relentlessly from the beginning of the pandemic helped us underline occupational therapists' role in managing COVID-19 patients. It instilled confidence amongst the medical fraternity about occupational therapists' capabilities in dealing with respiratory conditions. As a result, our proposal of rendering occupation-based services to acute COVID-19 patients at the NESCO jumbo care facility was readily accepted. It allowed us to showcase the effectiveness of OT in managing acute COVID-19 patients. Many patients thanked the therapists in their reviews for helping them to deal with their stress and upholding positive morale.

Our experience of COVID-19 helped us work towards the preparation of the next wave, which is expected to affect children more. In collaboration with the medical fraternity, the department made adequate preparations for facing the next wave affecting pediatric population.

CONCLUSION

COVID-19 pandemic presented new challenges to OT at the acute care setup. OT played an essential part in managing the COVID-19 pandemic in a tertiary acute care setup. The experiences of the COVID-19 pandemic helped us underline OT's role in the acute and administrative management of pandemics. OT is an ever-evolving field. COVID-19 pandemic gave us the opportunity to learn the following lessons, which may be useful to OTs for future preparedness.

- Adapting to nontraditional roles helped OT to facilitate organizational management of the pandemic
- Being flexible and innovative while working as a team member helped us assert our role as occupational therapists
- Adapting to new situations and environments became a powerful tool for occupational therapists to assimilate new challenges and respond effectively

- The fundamental core of OT-to maintain one's optimum functional independence along with meaningful social connections to maintain positive mental health was proved in this pandemic. Occupational therapists can use their theoretical knowledge base to aid society in building a crisis-resilient workforce
- Working in our core areas and implementing OT principles can help us sustain and make a difference to the organization and the health system
- Based on our experience, OT is recommended to engage in traditional and nontraditional roles and work with a multidisciplinary team in an acute care hospital to combat the COVID-19 pandemic.

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