

Enhancement of Manpower for Management of COVID-19 Crisis in India

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ABSTRACT

The Coronavirus Disease 2019 (COVID-19) pandemic overwhelmed not just the resources in terms of infrastructure but also manpower. With many healthcare workers turning COVID-19 positive themselves, and the healthcare system being overburdened, we were short-staffed in most health Institutions across India. In anticipation of a similar crisis, at our tertiary care centre, we came up with certain measures to enhance the manpower should the need arise for not just hospitals, but also the society at large.

Keywords: Coronavirus disease 2019, Community training, Healthcare workers, Third wave

INTRODUCTION

The entire world has been grappling under the effects of the COVID-19 pandemic since December 2019. The first wave in India, which hit us by surprise, showed us our limitations in terms of knowledge and pathology of the disease. By the time the second wave hit us, we were better equipped with the disease understanding, but manpower, physical resources, infrastructure, everything fell short. Now, although the prediction of the third wave has been inaccurate as per most epidemiologists and experts, the health authorities are ensuring the shortcomings of the second wave are not repeated. In terms of infrastructure, the authorities are building oxygen plants, making make-shift hospitals, hiring more staff, preparing at all levels with vigour and zeal like policy changes, updating knowledge and enhancing manpower [1].

In order to improve and strengthen our status for any rise in number of hospitalisations/healthcare needs, we took various measures to fight this virus with an all-round and full-strength preparation. Planning allocations of critical resources in the next phases of the pandemic, if we face it again, like ventilators, drugs, personal protective equipment and human resources is important as each state had epidemic peaks at different times especially in a large country like India [2]. We intend to enumerate the efforts and methods, we took at an Institutional level in order to enhance our manpower for the anticipated third wave, as it was one of those resources which we shockingly fell short of during the second wave.

These included, but were not limited to, enhancing our vaccination drive, educating people more about COVID-19 appropriate behaviour, remodelling the infrastructure of the hospital in order to accommodate the unexpected number of patients, increasing oxygen beds and making make-shift hospitals, setting up of oxygen concentrators in addition to existing oxygen sources and making facility to help patients recover post COVID-19, both psychologically and physically [3].

Buying new equipment, creating more infrastructures, etc., requires higher financial resources, but none of those are of any use if there are not enough trained personnel to handle the same. In this article, we wish to highlight the steps which we took in order to enhance the manpower to enable smooth functioning of healthcare facilities, reduce burden on existing medical professionals and enable the society to be better equipped to manage home isolation and basic first aid.

Healthcare Worker (HCW) training in COVID-19 ward and ICUs:

In case a similar situation like the second wave affects the unvaccinated younger paediatric population [4], HCWs need to be trained in management of infants/children. As anaesthetists/intensivists, are primarily trained to treat and manage adult

diseases, so in order to improvise our existing workforce, we are making endeavours to train ourselves in paediatric critical care as well. Similarly, non critical care and paraclinical branches are also being trained in providing adult and paediatric critical care. These are being done by the ways of small session teachings and short-observership postings in non COVID-19 ICU, in order to teach them basics of ICU. These residents can then be posted to COVID-19 management facility if need arises. Several guidelines and recommendations are available [5].

Education of HCWs: Doctors are encouraged to attend webinars to keep updated on the COVID-19 management protocols, COVID-19 related equipment usage, etc. In medical educational courses at all levels, undergraduate/postgraduate etc., COVID-19 related classes have been introduced to enlighten the students about basic diagnosis and management [6]. At our departmental level, students (postgraduate students, interns, undergraduate MBBS students, nursing students, other paramedical branch students), we have introduced relevant COVID-19 topics like oxygen therapy, effects of proning, spirometry, deep breathing exercises, chest physiotherapy, etc. in their syllabus of clinical posting as well. They are also given hands-on training under the supervision of senior residents and faculty. This ensures early training and availability of manpower in the time of need.

Mental health of HCWs: One of the most ignored aspect during the COVID-19 pandemic was mental health of our existing workforce in hospitals and other healthcare facilities. Loss of work days and efficiency was noted and high incidence of poor mental health existed, which led to loss of manpower, so it has been recommended to adopt supportive, encouragement and motivational, protective, and training and educational interventions, especially through information and communication platform [7]. We conduct regular social gatherings in our workplaces following COVID-19 appropriate behaviour, ensure rotational duties, and plan online recreational events to avoid mental fatigue.

Community training: Besides the existing workforce, we targeted enhancing the health work force by enabling regular citizens of the country to get trained in basic first aid/life support measures.

BLS (Basic Life Support) for all: Teaching on BLS to every citizen was a principle we were following even prior to the COVID-19 pandemic. We have been training all our medical and paramedical staff, guards, administrative staff, etc. in BLS for several years. Now in the current scenario in small groups of 10 or less than 10, we have started training accompanying persons of patients, community healthcare workers and other visitors to the hospital in BLS while they are sitting in waiting halls, etc. Our team have also conducted courses at residential communities, schools, bus stops,

etc. to teach the Compressions Only Life Support (COLS) under the guidance of Indian Resuscitation Council (IRC) [8]. After the training, these young students have been assessed what they have learnt, we are confident that we have produced many BLS providers in the community. We hope that this helps the pre-hospital phase in patient management and out of hospital arrests which have a higher mortality [9]. The specific changes in BLS keeping COVID-19 in mind, like avoidance of mouth-to-mouth resuscitations, covering of mouth with wet cloth during chest compressions, etc. are also taught during BLS training [10].

Educating youth become health assistants: Under the aegis of the competent authorities, both at the State and Central Government level, a new certified, Government approved course for the enhancement of manpower was started in the various premier Institutes of the country. Similar formal training for community empowerment was done in China and UK, but never in India, for the purpose of COVID-19 management at the grassroots level. Hence, this training is not only novel, but also innovative and shows preparedness and foresight by the health ministries.

During the second wave, a lot of doctors not only contracted COVID-19 infection but also succumbed to the infection [11], deeming them unfit to work in wards/ICUs/OPDs for several weeks. There were also a lot of patients who did not need hospitalisation, but needed home care but were left without any medical guidance. Similarly, a lot of patients in home care, could not get hospitalisation or escalation of medical therapy on time due to inadequate medical personnel overseeing their treatment. Hence, realising that the existing healthcare workers were insufficient to tide over the crisis of the second wave, either due to infection or quarantine, the state Government selected a few hospitals in Delhi where a two-week course which was directed towards educating and recruiting our youth for the third wave to enhance manpower not only in hospitals, but also in community health centres, primary health centres, residential communities, home isolation centres, etc. was started. This is a one-of-a-kind course in India certified by the Government which facilitates hands-on training in the hospital combining both theory and practical classes on mannequins and volunteers ending with a practical and theory exam.

By November 2021, we completed training of around 800 students with an average age of 18 years and equal sex ratio. Most of them were students who had just completed school and were awaiting jobs. We intended to educate these groups not just for third wave of COVID-19 in case it occurs, but also for other sorts of mass casualties like earthquake, floods, etc., and to assist the community in any need. During this period various topics are taught via lectures, small group interactions, skill stations and mannequin teachings. We educated these group of students about communication and counselling of patients and their families, basics about home management of COVID-19 patients, identification of a probable symptomatic COVID-19 infected patient, identification of patients with cardiorespiratory problems, donning and doffing of personal protective equipment, steps of hand hygiene, basic life support, using an oxygen cylinder and concentrator, various oxygen delivery devices, trauma care like wound management, Manual In-line Stabilisation (MILS) of spine, oral/nasal suctioning, basics of venous and arterial sampling, position changes like proning-awake and unconscious, monitoring vitals and their documentation, monitoring vital signs, shifting of patients in ambulances within same facility or to another facility, information about COVID-19 vaccination.

After completion of the course, we conducted an assessment of all the candidates to check their knowledge and skills and found the following [Table/Fig-1]:

The data obtained shows that after this two-week course we can get health assistants from the community who will be able to enhance

S. No.	Skill	Percentage of students who could perform the following skills (out of 800)
1.	Detect a COVID-19 patient who needs medical help	96.7
2.	Steps of hand hygiene, donning and doffing (PPE)	94.5
3.	Assist in starting oxygen therapy-handling oxygen cylinder, concentrator, therapy devices	88.9
4.	Vital sign monitoring	98.3
5.	Shifting patients from one facility to another	89
6.	Basic Life Support (BLS)	96.5
7.	Home management of COVID-19 patient	87.8
8.	Trauma Care-wound management, MILS, Spine support, etc.	88
9.	Being a first responder in out of Hospital setting like Road Traffic Accidents (RTA)	89
10.	Patient communication and counselling	91

[Table/Fig-1]: Percentage of students who could perform the following skills.

our professional strength in the community as well as in the primary healthcare centres, enhance strength for managing patients in home isolation with mild disease/asymptomatic patients who might need assistance. In a large country like India, even basic isolation principles for home isolation need to be reinforced and explained.

Infection rates are known to be higher in home care-givers, both trained and untrained, and hence, it was essential to teach basic donning and doffing [12].

Community volunteering has been shown to have positive outcomes in countries like China, and helped reduce burden on Governments and public agencies once resources were overwhelmed [13]. Similar programmes were seen in other countries like UK [14]. This by no means takes off responsibilities of competent authorities.

The data from the course conducted shows optimistic results, that should the need arise, common citizens can have basic medical training for emergencies, be trained in BLS, mass casualties and home care of ailments. Such a course should be encouraged in Institutes across the country for a more empowered community.

Enhancing the vaccination drive: This is also a means to enhance manpower, as by decreasing the number of hospitalisations, we would have more optimum doctor/staff: patient ratios. As enough data suggests [15], vaccination against COVID-19 can help reduce hospitalisations, and hence, reduce the burden on healthcare systems.

Both our vaccines, Covishield and Covaxin, were introduced soon after the first wave, but then they were available only for the at-risk population, i.e., population over the age of 45 years and frontline warriors. With the increasing production and availability of vaccines, we now target a much wider population, i.e., starting 18 years onwards. We are encouraging patients and their attendants in places like outpatient departments and waiting halls to get vaccinated. Larger population is being targeted using education materials, audio and visual media, incentives being given to vaccinated people at various entertainment centres and continuous research on this topic giving positive results.

COVID-19 appropriate behaviour: Besides encouraging vaccination, we also continuously emphasise on sanitisation of hands, use of masks and importance of safe physical distancing and other COVID-19 appropriate behaviour.

CONCLUSION(S)

We would like to encourage all healthcare Institutions to instil similar practices and encourage empowerment of manpower. This will not only help us tide over the anticipated third wave, but also help us with other calamities involving mass casualties in the pre-hospital and hospital phase. Time will tell whether our efforts are in the

right direction and will also depend upon the experience of other Institutions making such endeavours. In Indian context, the epidemic nature of the curve is declining and the disease is undergoing transition and slowly becoming endemic in our country and is likely to remain so in the future too. Hence, the current situation is not so worrisome and there is no need to panic, but it is always best to be prepared for the worst.

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