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Workforce strategies and challenges faced to mitigate risk for employees during COVID 19 in a 2000 plus bedded tertiary care teaching hospital in south India

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Abstract---Background- Many countries have devised formulas to protect their healthcare workers and also to increase number of staff available for primary care. In present study, the strategies employed in managing healthcare human resource during COVID-19, to understand the opportunities and challenges faced during the crisis and to initiate a health policy towards handling of workforce during a pandemic were studied. Methodology: The strategies employed by the HR department for manpower deployment during the pandemic were studied. Results: There were 393 doctors, 348 post graduates and 239 interns. Doctors' morning shift was from 8 am to 2 pm, evening shift from 2 pm to 8 pm and night shift from 8 pm to 2 am. Nurses morning shift was from 7:30 am to 1:30 pm, evening shift was from 1:30pm to 7:30pm and night shift for 1st batch: Covid patient care was from 7:30 pm to 1:30 am and for file work was from 1:30 am to 7:30 am and for 2nd batch: Covid patient care was from 1:30 am to 7:30am and for file work was from 7:30 pm to 1:30 am. For Lab technicians, timing was from 8 am to 2pm, 1 pm to 7 pm and from 7 pm to 8am and for HK staff was 7:30 am to 4:30 pm, 1:00 pm to 7:30 pm and from 7:30 pm to 7:30 am. Conclusion: Lot of challenges were faced during COVID- 19 pandemic. Proper executed strategies overcome the barriers.

Keywords---COVID-19, pandemic, workforce strategies.

Introduction

The COVID-19 pandemic has had a profound impact on the health care delivery system and its workforce. As cases surged across the world, many countries responded with efforts aimed at building workforce surge capacity and developing new ways for patients to access services. An effective response to an emergency situation like COVID -19 always depends on the preparedness of the healthcare workers. There has to be proper communication from the managers to the staff. Being away from the family also adds to the mental fatigue and hence proper timing and regulation of shifts is very important during such times. WHO has in fact focussed on surge capacity tools during the time of pandemic to support Member States during the peak of the outbreak. The Adaptt Surge Planning Support Tool is an Excel based graphical tool enabling members to focus on number of beds required, dates of predicted shortages and detailed information about human resources required.²

In all settings, health care workers have the potential to be exposed to COVID-19 and further spread the disease, require quarantine, or become seriously ill or die. Personal protective equipment (PPE); cohering strategies; and screening, contact tracing, and appropriate quarantine are critical to minimize risk and loss of health workers, as well as the unintentional spread of the disease. Studies by psychiatry departments of reputed institutes reveal the unprecedented challenges brought by the pandemic and the psychological impact of the same. A need has been emphasized about institutions to be open to their staff regarding policy planning for future and ensure availability of safety measures mentioned above for them. They should offer accommodation in the form of quarantine facilities and offer them pre counselling before deploying them to clear queries.³

A lot of effort and capital has also gone into shaping healthcare delivery for future including vaccines and therapeutics. However less attention has been devoted to supporting our workforce who would be responsible for blending in these features into the healthcare system. Our health care system in India is organised into three levels- primary, secondary and tertiary.⁴ The top level of medical care is provided by the tertiary centres which includes both public and private players. Our hospital being a premier institute with almost 3000 outpatients and 200 admissions per day plays an important role in healthcare delivery. The hospital employs a significant number of healthcare workers including doctors, post graduates, interns, nursing staff and housekeeping personnel who require proper management for the institute to function with maximum output.⁵ Hence our objective was to study the strategies employed in managing healthcare human resource during COVID-19, to understand the opportunities and challenges faced during the crisis and to initiate a health policy towards handling of workforce during a pandemic.

Methods

The present study was conducted on employees during COVID 19 in a 2000 plus bedded tertiary care teaching hospital in south India. All gave their written consent for the participation of the study. Demographic profile of each enrolled subject was recorded. We recorded total strength of doctors, Duty shifts of staff

including PGs', interns, their transport, sickness and Opportunities and challenges faced. Strategies employed in KH was studied. Results were tabulated and entered in MS excel sheet for statistical analysis. P value less than 0.05 was considered significant.

Results

Table I
Total strength of doctors in K.H.

Occupation	Number	P value
Doctors (Teaching staff)	393	0.91
Post graduates	348	
Interns	239	

Table I shows that there were 393 doctors, 348 post graduates and 239 interns in present study.

Table II
Staff per shift and duty timings

Shift	Doctors	Interns	Lab technicians	HK staff
Morning shift	8am to 2pm	7:30 am – 1:30 pm	8 am – 2pm	7:30 am – 4:30 pm
Evening shift	2pm to 8 pm	1:30pm to 7:30pm	1 pm – 7 pm	1:00 pm – 7:30 pm
Night shift	8pm to 2am and 2am to 8am	1 st batch: Covid patient care:- 7:30 pm – 1:30 am File work: 1:30 am – 7:30 am 2nd batch: Covid patient care: 1:30 am – 7:30am File work: 7:30 pm – 1:30 am	7pm-8am	7:30 pm – 7:30 am

Table II shows duty shifts of staff. Doctors' morning shift was from 8 am to 2 pm, evening shift from 2 pm to 8 pm and night shift from 8 pm to 2 am. Nurses morning shift was from 7:30 am to 1:30 pm, evening shift was from 1:30pm to 7:30pm and night shift for 1st batch: Covid patient care was from 7:30 pm to 1:30 am and for file work was from 1:30 am to 7:30 am and for 2nd batch: Covid patient care was from 1:30 am to 7:30am and for file work was from 7:30 pm to 1:30 am. For Lab technicians, timing was from 8 am to 2pm, 1 pm to 7 pm and from 7 pm to 8am and for HK staff was 7:30 am to 4:30 pm, 1:00 pm to 7:30 pm and from 7:30 pm to 7:30 am.

Discussion

As a result of COVID-19 more than 2.7 billion or more than 4 out of 5 five workers in the global workforce have been affected by lockdowns and stay at home measures. Studies done in various countries also show that while there are measures being taken for crisis management, they would have to move forward and also integrate full range of health workforce consideration in the subsequent planning phases.⁶ One of the most consistent challenges of the Covid-19 pandemic has been the shortage of health workers. As healthcare facilities reach maximum capacity, hospitals, nursing homes, and other healthcare providers have experienced an urgent need for additional help and backup staff, so healthcare staffing has had to get creative. Apart from stress levels workers also had physical symptoms after providing care to patients. Systemic review of literature across 2 data bases: PubMed and Google scholar 10 articles which identified the risk factors and the consequences of providing healthcare to patients with COVID 19 among healthcare workers.⁷ Health workers complained of fever, cough and weakness and some people also experienced cutaneous manifestations due to prolonged use of PPE.⁸

Meanwhile studies done in countries such as Siberia showed that COVID -19 pandemic had a significant negative job impact on frontline workers.⁹ They experienced dissatisfaction on the job and a need for workforce management. WHO studies focuses on cross country strategies being adopted to expand health workforce capacity to treat COVID 19 patients.¹⁰ Some countries have focussed on increasing working hours, cancellation of leaves during peak seasons, engaging nursing and medical students to help and bringing back retired or inactive healthcare professionals. All this adds to the stress levels of healthcare workers and emphasises the need for health care workforce strategies.¹¹ In present study, there were 393 doctors, 348 post graduates and 239 interns in present study. In our study, the whole hospital was managed with only 1/3rd of the total workforce. Cohorting strategies to segregate the vulnerable population like senior doctors and nurses, pregnant workers were done. They were allowed to take paid leave from work or the option to work from home was given. Duty timings of the staff were modified accordingly.

During Covid time, all PG`s irrespective of their specialities, resident doctors and senior resident doctors except Professors and the doctors above the 55 years of age were working in covid wards, ICU 1, ICU 2, ICU3, and SARI ICU, Charaka wards, Baliga wards. There was the restriction for aged professors and doctors to come for duty in K.H. Duty of PG`s during covid time were monitoring the patients in Covid ICU and wards, checking vitals and observation of the patient, procedures in ICU and wards, PG`s of second year and third years were doing the duty during covid time. Duty type in surgical wards was for 1 month and in Covid ward / ICU was for 10 days. Duty of interns during covid time was patient`s swab collection, prescribing the drugs / medications to patients and clearing the discharge summary. They were getting 10 days off`s after the five days duty. Sometimes it was varying according to the availability of staffs.

In our study, morning shift was from 8 am – 2 pm, evening shift was from 2 pm – 8 pm and night shift was from 8 pm – 2 am and from 2 am – 8 am. The mode of

transportation was own vehicles such as cars or bikes, most of the doctors were residing near to the K.H. Some doctors were getting shifted to nearby flats and rooms in Manipal. In case of sickness, interns were getting less chances for exposure to COVID, because they were doing the duty outside of the ICU's. Doctors were given special off's for the purpose of quarantine or isolation in case of sickness or becoming covid positive. Continuous and uninterrupted supply of PPE kits and sanitizers were provided to all. Doctors were given separate clothes to be worn only during duty hours. Continuous monitoring of health workers by infrared thermometers was done. Quarantine facilities were provided for the positive workers. Transport facility to pick and drop the doctors from their place of residence was initiated.

Opportunities and challenges faced was us was COVID 19 proved to be the perfect storm for digital acceleration. It forced an almost overnight transformation of the workplace. Teleconsultation, digital modes of payment, video conferencing replaced the conventional norms quickly. It helped hospitals to relook into the process of infection control in a more stringent manner. Although there were some positive effects COVID 19 had effectively disrupted healthcare services. In a country like India with a population of more than a billion and a healthcare infrastructure that can't cater to the whole population the challenges faced were many.^{12,13} Some of the challenges faced by our organization is as follows to sensitize the staff to continuously evolving guidelines of COVID pandemic, handling fake news, to manage sudden absenteeism among employees, maintaining employee motivation, to keep the attrition rates low, continuous supply of PPE, sanitizers, to maintain continuous supply of consumables required in lab for the newly set up COVID testing center and to pay the salaries of all employees. Limitation of the study was that it was conducted only in one tertiary care teaching hospital.

Conclusion

Lot of challenges were faced during COVID- 19 pandemic. Proper executed strategies overcome the barriers.

References

1. Ares-Blanco S, Astier-Peña MP, Gómez-Bravo R, Fernández-García M, Bueno-Ortiz JM. Human resource management and vaccination strategies in primary care in Europe during COVID-19 pandemic. *Atencion Primaria*. 2021 Jun 9;53(10):102132.
2. Bourgeault IL, Maier CB, Dieleman M, Ball J, MacKenzie A, Nancarrow S, Nigenda G, Sidat M. The COVID-19 pandemic presents an opportunity to develop more sustainable health workforces. *Human Resources for Health*. 2020 Dec;18(1):1-8.
3. Cahan EM, Levine LB, Chin WW. The human touch—addressing health care's Workforce Problem amid the Pandemic. *New England Journal of Medicine*. 2020 Oct 29;383(18):e102.
4. Chang, M. O., Labaut, B. Y. R., March, G. R., & Serrano, E. R. O. (2021). Psychological impact of COVID-19 on the sports population from Santiago.

- International Journal of Life Sciences, 5(3), 140–147.
<https://doi.org/10.29332/ijls.v5n3.1577>
5. COVID-19 Health System Response Monitor. Cross-Country Analysis: What strategies are countries using to expand health workforce surge capacity to treat COVID-19 patients? World Health Organization Regional Office for Europe, European Commission, European Observatory on Health Systems and Policies.
<https://analysis.covid19healthsystem.org/index.php/2020/04/23/what-strategies-are-countries-using-to-expand-health-workforce-surge-capacity-to-treat-covid-19-patients/>.
 6. Dinić M, Šantrić Milićević M, Mandić-Rajčević S, Tripković K. Health workforce management in the context of the COVID-19 pandemic: A survey of physicians in Serbia. *The International Journal of Health Planning and Management*. 2021 Jan 1.
 7. Duffield, C.M., Roche, M.A., Homer, C., Buchan, J., Dimitrelis, S. A comparative review of nurse turnover rates and costs across countries. *J. Adv. Nurs* 2014;70: 2703–2712. 12.
 8. Greenberg, N., Docherty, M., Gnanapragasam, S., Wessely, S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020;1211. <https://doi.org/10.1136/bmj.m1211>.
 9. Kim, M.-S., Kim, T., Lee, D., Yook, J., Hong, Y.-C., Lee, S.-Y., Yoon, J.-H., Kang, M.-Y., 2018. Mental disorders among workers in the healthcare industry: National health insurance data. *Ann. Occup. Environ. Med.* 2014;30.
 10. Kshirsagar, V. Y., & Budihal, V. (2022). Clinico-etiological profile of COVID-19 positive paediatrics patients in a tertiary care hospital: A retrospective study. *International Journal of Health Sciences*, 6(S3), 1613–1622. <https://doi.org/10.53730/ijhs.v6nS3.5712>
 11. Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., Hu, S., Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open* 2020;3:20397.
 12. Menon V, Padhy SK. Ethical dilemmas faced by health care workers during COVID-19 pandemic: issues, implications and suggestions. *Asian journal of psychiatry*. 2020 Jun;51:102116.
 13. Nafar H, Aghdam ET, Derakhshani N, Sani'ee N, Sharifian S, Goharinezhad S. A systematic mapping review of factors associated with willingness to work under emergency condition. *Human resources for health*. 2021 Dec;19(1):1-0.
 14. Shadmi E, Chen Y, Dourado I, Faran-Perach I, Furler J, Hangoma P, Hanvoravongchai P, Obando C, Petrosyan V, Rao KD, Ruano AL. Health equity and COVID-19: global perspectives. *International journal for equity in health*. 2020 Dec;19(1):1-6.
 15. Shaukat N, Ali DM, Razzak J. Physical and mental health impacts of COVID-19 on healthcare workers: a scoping review. *International Journal of Emergency Medicine*. 2020 Dec;13(1):1-8.
 16. Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). Health and treatment of diabetes mellitus. *International Journal of Health Sciences*, 5(1), i-v. <https://doi.org/10.53730/ijhs.v5n1.2864>
 17. WHO. Strengthening the Health System Response to COVID-19: Recommendations for the WHO European Region. Policy Brief. Copenhagen:

WHO Regional Office for Europe;
2020. <https://www.euro.who.int/en/health-topics/Health-systems/pages/strengthening-the-health-system-response-to-covid-19/surge-planning-tools>.