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Health care practices in India during COVID -19 pandemic, What is done and What has to be done, Risks, Recommendations & Future: A web survey

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Abstract
Background: *Health care workers and health care practices has been severely affected in COVID pandemic. The rate of infectivity and death rate in doctors and other health care workers is three times the general population. All the procedures involving aerosol generation, close contact, sample collection increases the susceptibility of health care force to COVID infection. They are also considered as potential source of infection by the general population.*
Material and method*: Material relevant to the topic were collected from guidelines issued by ICMR, Recommendations & guidelines issued by ministry of health & family welfare India, Indian news daily & national health agencies*
Results*: In this difficult pandemic time it is of absolute necessity to provide protection to health care staff as well as to ensure treatment for all COVID and Non-COVID patients. By following the guidelines and SOPs for different procedures and infection control and prevention measures we can achieve the intended goal.*
Conclusion: *This pandemic has introduced changes in our health delivery methods and practices. Teleconsultation is an emerging trend and is making a positive impact in our health care system. We will have to ensure behavioural changes and ethical practices at individual, clinical and public level.*
Key Words*: Health care workers, COVID-19, Practice guidelines*
Aim
To study risks of health care practices in India in COVID-19 pandemic , recommendations and future trends of practice
Objective
1. To study risks associated with health care practi in India
2. Recommendations for safe practice
3. Recent trend in health care practices due t0 pandemic effects

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I. Introduction

The 2019 novel corona virus was declared as pandemic by World Health Organization on March 11, 2020. This began as an outbreak in Dec 2019 in Wuhan city of Republic of China. The virus causing respiratory infections spread quickly across the globe in the first months of 2020 reaching more than 15 million confirmed cases by the second half of July. Globally as of now there have been 25,614,695 confirmed cases of Covid-19 including 854,029 deaths reported to WHO. [1,2,3,4]

In India 3,769,523 confirmed cases of Covid-19 and 66,460 deaths have been reported. Every day 2,485 cases are being added. The virus has been detected in 213 countries almost half of the cases reported so far were from just three: US, Brazil, India. Health experts think COVID -19 may follow second wave of cases but there is no firm agreement on what exactly constitutes a second wave. The population size of affected people varies due to being in different stages of pandemic. [6,7]

Health care workers are the most susceptible & vulnerable persons to COVID-19 infection. [1,2,3,4] Covid-19 has claimed the lives of at least 99 doctors in india. As of now 1302 doctors have been found to be infected as per the data given by Indian Medical Association. The actual number of doctors affected is even more than what has been given by IMA. These figures are alarming and needs to be taken care of with all possible efforts. [5,6,7]

In this time of difficulty to ensure safety to the doctors and to counter the spread of infection some recommendations have been given by the Ministry of Health and Family welfare. Future practice of medicine has been introduced with some changes and is going to change the health care practices in India.[10, 11] This

study includes the risks that doctors facing in COVID-19 era, recommendations for safe practices and new practicing guidelines and its effect on future medical practices and well being of doctors in India. [2,3,6]

II. Material & Methods

Material relevant to the topic were collected from guidelines issued by ICMR, Recommendations & guidelines issued by ministry of health & family welfare India, Indian news daily & national health agencies

1. The medline & web of science databases, scopus, pubmed, research gate were also searched using Covid -19, SARS-CoV-2 in association with doctors, health care professionals, Indian medical association, and ICMR.
2. Data collected was from Mar 2020 to till date

III. Result and Discussion

In the past two decades this is the third instance of the emergence of a novel corona virus after severe acute respiratory syndrome (SARS) in 2003 & middle east respiratory syndrome corona virus (MERS-CoV) in 2012. The repeated emergence & global scale of transmission, significant number of deaths, infection & mortality of care providers & health care workers & higher risk of death in risk or susceptible groups have been the major causes of concern.

Risks

Health care workers are at most risk & there is no official tally of their deaths. More than 77,800 have tested positive for the corona virus & more than 400 have died world wide. As per The Hindu on 23 April 2020 at least 412 medical workers have been exposed to the disease. At least 96 doctors & 156 nurses have tested positive for Covid-19 across India as of April 22 & the number is increasing.

The number of actual deaths is nearly three times higher as the data compiled by the medical association as IMA includes 3.25 lakh members of whom only 10% are in government hospitals. There are nearly 11 lakh registered doctors in india. A large number of Aayush doctors and homeopathic doctors have also died due to Covid-19. Reports of death in doctors practicing dental surgery has also been reported. So the actual data is much more than what has been given by Indian medical association. The fatality rate for doctors due to Covid-19 is 7.6% nearly 2.5 times higher than the national case fatality rate of 2.6%. The union ministry of health and family welfare has not yet released any data on infection prevalence and deaths among doctors and other health care workers. A lab surveillance report published by Indian medical council and research had shown that of the total confirmed cases of Covid-19 in India till April 30, more than 5% were health care workers. 73 doctors who succumbed to the Covid-19 infection were about 50 yrs of age, 19 were 35-50 and 7 were under 35. [1-6]

50 of those dead were general practitioners followed by 40 specialists. It reports death of some residents also. All the doctors who are dealing with practices involving aerosol generation are particularly at more risk. ENT specialist, maxillofacial surgeons, anaesthetics are at increased risk. Health care workers dealing with diseases of aerodigedtive tract have a risk ratio of 2.13 so they need to take precautions while doing these procedures and attending patients suggestive of COVID-19 symptoms. As the disease is rapidly evolving & has unpredictable outcome, its ways of transmission & varied presentations are still not very well known & that is going to affect the precautionary measures both at patient & doctor level. It is not a common practice to use gloves & gowns at all times to attend all patients & at the same time patients examination requires close contact with the patient and at high risk of acquiring infection as well. Asymptomatic patients & patients with subclinical presentations are an important source of infection. As the disease is rapidly evolving & has unpredictable outcome, its ways of transmission & varied presentations are still not very well known & that is going to affect the precautionary measures both at patient & doctor level. [6,7] As per the recommendations of ministry of health & family welfare, India, guidelines laid down by ICMR, lab diagnosis requires sample collection in the form of nasal swab & throat swab. Mostly these collection are done by doctors and health care staff subjecting them to increasing anxiety. Ideally collection of samples should be done after proper donning of PPE (protective personnel equipment). Disruption of supply chain of PPE can cause anxiety in health professionals. [12,15,16]

Health care called as a job for many, during a pandemic visiting & treating patients with a disease with higher mortality & infectivity is almost a daily reckoning not just with one's own mortality but also with a growing sense of powerlessness. This pandemic is imposing a physical, mental & emotional burden to all health care persons. Work place related risk & their concerns to their family members increases mental anxiety, stress level & thus decreases immunity. Health care personals are considered as source of infection by the community & it can lead to maltreatment. There have been incidences where resident doctors were thrown out by the house owner's citing risk associated with their work.

IV. Recommendations

Doctors need to take responsibility of the situation and they need to ensure their own safety and that of their families, colleagues and staff. It is very important to ensure the health both at physical & mental level and safety of health care persons at work place as well as in the community. In this scenario every patient visiting to the health clinic should be considered as a potential source of infection and should apply respiratory protective strategies.[14]

Ministry of health and family welfare has given an advisory for managing health care workers in COVID-19 and non-COVID areas of the hospital. The health work force is a valuable and scarce resource. Large number of COVID- 19 affected health persons getting isolated for treatment and their close contacts undergoing quarantine, affects the delivery of health services. So the present advisory lays guidelines to ensure safe practices and safety to health care staff. All hospitals should activate its hospital infection control measures. Every hospital should have its infection control committee. Hospital infection control committee will be responsible for implementing the infection control activities and organizing regular training on infection prevention and control for health care workers. A nodal officer or an infection control officer shall be identified by each hospital to address matters related to health care associated infections. It is the duty of health care workers to ensure that health care staff is using personal protective equipments appropriately to their risk profile. All health care worker should be trained on infection prevention and control and they all are aware of common signs and symptoms required for self health monitoring and need for prompt reporting of such symptoms. Regular thermal screening of all health care staff should be done. Everyone should have Aarogya setu and Aarogya kavach app in their mobile. All health care workers managing COVID -19 patients should be given chemoprophylaxis under medical supervision. Prompt reporting of breach of PPE by hospital staff should be reported and follow up action should be initiated. All health care staff should practice preventive measures like frequent hand washing, use of alcohol based hand sanitizer, using tissue / handkerchief while coughing or sneezing should be followed at all times while on duty. A buddy system is to be followed to ensure that there is no breech in infection prevention control practices. In buddy system two and more person team is formed amongst the deployed hospital staff who share responsibility for his/her partners safety and well being in the context of appropriately donning and doffing of PPEs, maintain hand hygiene and taking requisite steps on observing breech of PPEs. Any breach in PPE and exposure is immediately informed to the nodal officer/HOD of the dept. Health care workers must follow social distancing and masking to prevent transmission to acquiring infection from other health care workers who may be positive. Pregnant lactating mothers and immunocompromised health workers shall inform their medical condition to the hospital authorities. These persons should not be posted in COVID areas. Any exposure to COVID must be reported to the nodal officer with immediate effect. Health care workers are divided into high risk exposure group and low risk exposure group. Different SOPs are there for different group. High risk exposure group are those COVID-19 case without recommended PPE or with possible breach of PPE, those involved with aerosol generating procedures without appropriate PPE, those health care workers who are without mask/face shields and goggles, those having face to face contact with COVID-19 patients and were in contact for more than 15 minutes within 1 meter distance. Low risk group are those who do not meet criteria of high risk exposure. [13,14,15,16]

As per the advisory nodal officer and the head of the dept will form a subcommittee to assess the level of exposure and the risk . High risk contacts will be quarantined for 14 days, will be evaluated as per ICMR protocol and will be actively monitored for development of symptoms and managed as per recommendations. If they test positive but remain asymptomatic they will follow protocol for mild or mild presymptomatic cases. If they test negative and remain asymptomatic , complete 14 days quarantine and return to work. If symptoms develop should follow guidelines as issued in health care workers with symptoms suggestive of COVID-19. Low risk contacts shall continue to work and will self monitor their health for development of symptoms. Moderate cases that require oxygen therapy shall be managed at a dedicated COVID health center. Severe cases will also be managed at COVID center. For COVID patients admitted discharge will be as per recommended guidelines. Those who test negative will be managed at non-COVID centers as per their clinical diagnosis. They can resume work only by medical certification by the treating doctor. Regular quarantine of treating doctor after performing duty must be followed.[13]

Future practices:

In India there were no proper guidelines for telemedicine practices and in some states it was banned also. Emergence of COVID-19 has changed the health care outlook to a great extent. Health care system is highly overburdened and at increased risk. Practice of telemedicine will surely reduce this burden. With the implementation of telemedicine guidelines teleconsultation is possible and this will reduce the patients visit to out door patient clinic. Based on teleconsultation it can be decided who requires physical examination. This is in its preliminary stage but is definitely quite helpful in reducing the number of patient visit to hospital and their chances to acquire infection. Telemedical consultation will also reduce the work load of health care workers by

decreasing number of patients visiting to hospitals. Patients requiring physical visit should be given appointment to maintain less number of patients in examination room. [17]

All emergencies require immediate attention. Timely treatment to all is mandatory. So COVID and non COVID hospital should be demarcated. COVID patients and patients with symptoms suggestive of COVID should be treated only in COVID centers. Non-COVID centers before admitting a patient for treatment should be ruled out for COVID. All the surgeries and procedures should be done as per the laid down criteria. Infection control measures should be followed strictly. PPEs should be used as per the list given by ministry of health and family welfare guidelines.[17]

Behavioural changes must be ensured. We must take proper safety measures. This is the time to practice ethical behaviour at personnal, clinical and community level. At personal level we must practice infection prevention measures. At clinical level while attending to patients appropriate PPEs must be used. [7] Procedural safety should be ensured. At community level guidelines proposed by the ministry of health and family welfare must be ensured

V. Conclusion

Being a health professional treatment can not be denied for long & emergencies can not wait. With proper implementation of practice guidelines and implementation of teleconsultations treatment for all can be ensured along with providing physical and mental well being to health care personals and is definitely a welcome sign in pandemic times.

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