

# COVID-19 Pandemic and the Mental Health of Health Care Workers: Awareness to Action

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Ann Natl Acad Med Sci (India):2020;3:171–176

## Abstract

The enormity of the coronavirus disease-2019 (COVID-19) pandemic has overwhelmed most health services and has placed health care service providers under unprecedented stress. The rapidity of spread, uncertain clinical course, and unavailability of effective treatment make clinical decisions cognitively demanding. Extended work hours inside uncomfortable protective gears, improper hydration, with conflictual health systems and patients at work; and social stigma and isolation after it ends, have created an unending downward spiral of mental health in care providers. Care providers are at increased risk of developing mental health problems in form of burnout, stress reactions, anxiety, depression, and post trauma stress. Concerted strategies for managing the mental health of care providers are urgently needed at individual and systems level. A plethora of strategies, developed from previous experience of crisis management, need to be made available to care providers through accessible mediums of delivery. This paper explores the mental health problems encountered by health care personnel and examines various strategies which need to be implemented to manage them.

## Keywords

- ▶ mental health
- ▶ COVID-19
- ▶ health care worker
- ▶ depression
- ▶ stress
- ▶ management

## Introduction

Coronavirus disease-2019 (COVID-19), caused by the novel coronavirus (severe acute respiratory syndrome coronavirus-2 [SARS-CoV-2])<sup>1</sup> has emerged as the most significant global health crisis of our times. The outbreak was declared a Public Health Emergency of International Concern in January 2020, and was subsequently designated as a pandemic in March 2020.<sup>2</sup> In just 144 days since the first reported case in Wuhan, COVID-19 infected 4,993,470 persons globally and claimed more than 327,738 lives.<sup>3</sup> The World Health Organization as on May 22, 2020 projected a daily new infection of around 103,211 persons/d with around 4,477 deaths per day. In India, the first case of COVID-19 was reported on January 30, 2020 in the state of Kerala. The Ministry of Health and Family Welfare, Government of India reported a total of 124,462 cases and 3,583 deaths in the country as of May 25, 2020 with the number growing fast.<sup>4</sup> A nationwide lockdown was initiated in the country on March 24, 2020, which was extended in phases due to rising number of cases, and was partially lifted after May 31, 2020. With surge in cases and hospitalizations, health care workers (HCWs) around the

world have been thrust into the position of frontline personnel in the war of survival. The role of HCWs in such times of unprecedented crisis is challenging and is fraught with both physical and mental health consequences.<sup>5</sup>

The psychological impacts of COVID-19 are many and the HCWs are not immune to it.<sup>6-8</sup> The increase in working hours, inability to meet family and friends, fear of transmitting the infection to family members, unfavorable working conditions in areas with limited resources, overenthusiastic reporting by media and projecting HCWs as COVID warriors, and paradoxical societal stigma, all contribute to the emergence of various mental health problems. Over the past few months, mental health problems faced by HCWs have been increasingly highlighted by health professionals themselves,<sup>5</sup> with an associated upsurge of research communications in scientific journals. There is an urgent need for identification and management of mental health issues in the HCWs through support, counselling, and psychotherapeutic strategies as and when required. This paper discusses about identification and management of common mental issues faced by HCWs involved in management of patients with COVID-19.

DOI <https://doi.org/10.1055/s-0040-1715285>  
ISSN 0379-038X.

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## Mental Health Issues in Health Care Workers

Global crisis situations are likely to adversely impact a large section of the general population due to the associated stress, uncertainty, and fear. Infectious disease outbreaks in the past including severe acute respiratory syndrome (SARS) epidemic and H1N1 pandemic were associated with reports of stress, anxiety, depression, burnout, post-traumatic stress disorder (PTSD), and other mental health issues in HCWs.<sup>7,9,10</sup> Occurrence of mental health problems in medical staff, including doctors and nurses posted in COVID duty, has been reported uniformly across developed as well as resource constrained countries.<sup>11-15</sup> Mental health disturbances varying from subthreshold (36.9%), mild (34.4%), and moderate (22.4%) to severe (6.2%) level as assessed on the Patient Health Questionnaire have been reported in the HCWs in Wuhan.<sup>16</sup> Another study from China reported that about half of the HCWs had symptoms of depression, 30% experienced insomnia, 45% had anxiety, and more than 70% reported distress due to COVID-19.<sup>17</sup> Socio-demographic factors like age, gender, place, and department of work and psychological factors like poor social support were associated with depressive and anxiety symptoms as well as with increased reporting of stress and insomnia.<sup>6</sup> A multinational and multicentric study, which also had 3 centers from India, reported that though the rates of depressive and anxiety symptoms were similar to other studies, 5.3% of the subjects screened positive for moderate to very severe depression, and 8.7% had moderate to extremely severe anxiety. Headache (32.3%) was the commonest physical symptoms reported, and physical symptoms experienced in the preceding month were predictive of subsequent depression, anxiety, or PTSD.<sup>11</sup> Another study from Singapore reported of lower scores on Depression, Anxiety, and Stress Scale and Impact of Events Scale-Revised in HCWs during the current pandemic as compared with previous SARS epidemic, citing increased mental preparedness and stringent infection control measures after Singapore's SARS experience as possible reason.<sup>15</sup> The current pandemic is both a challenge as well as an opportunity for working on not only the development of clinical expertise but also on psychological preparedness of the HCWs. Steps need to be taken for timely assessment of the HCWs so that help can be offered for the mental health issues that they face.

## Stressors Contributing to Psychological Distress

The emotional distress experienced by HCWs remains multifactorial in causation. Disaster mental health research conducted in the past and present has highlighted various factors which contribute to nonspecific symptoms of psychological distress as well as psychiatric disorders in the workforce. Factors related to work, finances, social support, personal predilection and resilience often combine to determine the expression of symptoms.

## Work-Related Stressors

The rapidly changing face of the pandemic is a challenging task to deal with for clinicians as well as researchers. The unpredictability of the nature of the virus and its mutations, variability of the clinical course in patients, and lack of any curative treatment options make all clinical decisions a judgment call, cognitively stressing decision makers.<sup>18</sup> Awareness about the lack of any definite and effective treatment can lead to therapeutic nihilism. Multiple and rapidly changing guidelines have resulted in an information explosion that clinicians need to assimilate rapidly into clinical practice. Coupled with the increase in working hours and expansion of workload due to increasing critically ill patients, clinicians face the moral dilemma of choosing between knowledge or service. Non-availability of adequate resources including personal protective equipments (PPEs), ventilators, and crucial equipments, in even the most resourceful health systems, force HCWs to take on additional roles of protesters and whistleblowers.<sup>19</sup> Apart from the fear of the possible patient to HCW infection, workforce shortage and death of coworkers can quickly erode the moral of the whole unit.<sup>20</sup> Difficulty in dealing with patients not willing to opt for quarantine, or not following prevention protocols and using masks leads to increased workplace conflicts. Patient anger due to genuine infrastructural shortcomings are often borne by HCWs as they remain the proximate representative of the system.<sup>21</sup> Prolonged work hours and post-duty-quarantine protocols have ramifications beyond workplace stress. Worry about family members and inability to fulfil family role obligations due to work is a source of concern. A survey conducted on HCWs in China revealed that once the medical staff initiated their COVID-19 duties, their primary reason of worry was the fear of transmitting the virus to family members rather than getting infected themselves.<sup>22</sup>

## Inadequate Social Support

HCWs often need to stay away from their friends and families, due to the fear of transmission to family members. Strict physical distancing measures, that need to be followed at work, deprive HCWs of their workplace social and human interactions that help reducing stress.<sup>23</sup> In an already stressful environment, HCWs feel isolated and lonely on work and off work. The impact of poor social support on mental health and self-efficacy of HCWs has been highlighted by multiple authors.<sup>24</sup> HCWs have repeatedly reported their physical health to be poor, with sleep deprivation, headache due to rebreathing, dehydration due to thermal build-up in PPEs, and fatigue due to inability to eat in PPEs. Inadequate access to adequate psychological help has led to aggravation of mental health issues in HCWs.<sup>16</sup>

## Stigma, Hostility, and Media Response

The lack of adequate awareness and knowledge amongst general public about the pandemic has led to stigmatizing attitudes and outright hostility toward the HCWs. Doctors have been locked up in their houses, asked to vacate their rented accommodations, physically abused in markets, and

have been refused cremation in death in India. Media has highlighted events of mass assault on HCWs during contact tracing efforts. Globally, HCWs have been pelted with eggs (Mexico), attacked with bleach (Philippines), spit upon and harassed (United States and Australia).<sup>21</sup>

Though various attempts are being made by the Government, organizations, and media platforms to increase awareness, the incidents of general public expressing anger and aggression toward HCWs continue to happen. A constant media scrutiny, media sensationalism and lack of follow-up reporting create an environment of permissiveness for violence against HCWs. In contrast, overenthusiastic reporting, projecting the staff as frontline heroes and saviors, lead to unnatural patient and societal expectation, pressurizing HCWs. All these factors have the potential to contribute to psychological distress.

### **Inadequate Communication and Associated Guilt**

As the patient load has increased, the average time an HCW spends on a patient has decreased. Use of masks and PPE make it difficult to have a good and satisfying communication with the patients. Many times, the HCW has to work in ways which is not pertaining to the usual standards. The staff also needs to ensure that relatives and friends of patients are not exposed to the virus which requires following specific protocols on not allowing family members to meet patients, and see or collect the body after death. Breaking the bad news of death may not be properly handled as in usual situations and often information is given to family members telephonically. HCW may sometimes feel guilty for the same which can further lead to mental health concerns. The feeling of guilt can also arise in HCWs who have been quarantined after exposure or belong to a special population like pregnant females, who may feel guilty of not being able to help at the frontline.<sup>13</sup>

## **Commonly Encountered Mental Health Issues**

The pandemic has an alarming impact on the mental health of general public and HCWs. Prolonged periods of shouldering the burden have raised concerns about the psychological impact on the medical personnel involved in providing care. Some of the common mental health issues encountered are discussed as below:

### **Burnout**

Burnout has been described as a triad of decreased sense of accomplishment, depersonalization characterized by lack of compassion and empathy, and emotional exhaustion.<sup>22</sup> It does not fall under the category of any specific psychiatric disorder but has a significant impact on the work efficiency and competency and can further lead to development of psychiatric symptoms and illness. Medical staff experiencing burnout may opt for quitting their jobs or may not be able to function adequately. The overall quality of life may get compromised. It is important that burnout be identified early, so that steps can be taken to manage it.

### **Moral Injury**

Moral injury is not a psychiatric disorder but a term that has been borrowed from military. Any action that goes against one's moral or ethical values can result in moral injury. The parallel examples in medical staff in comparison to situations faced by military personnel can be multiple. These may include choosing between two critically ill patients who require attention at the same time, following circulated protocols which one may personally not believe to be based on one's clinical experience or making treatment decisions which do not turn out to be fruitful in terms of saving life of patients. HCWs who face this problem may be prone to develop negative emotions and negative cognition. They may feel guilty or ashamed of either committing or omitting an action and feel stressed. Some HCWs may emerge stronger after being confronted by challenging situations, with strengthening of their psychological resilience and self-esteem, often referred to as post traumatic growth.<sup>25</sup>

### **Acute Stress Reactions**

The HCWs are exposed to various stressors as has been discussed previously in this paper. The stressors can lead to transient stress reactions which might resolve in a period varying from few hours to 2 to 3 days. Affective, cognitive, physical, and autonomic signs of anxiety are common presenting symptoms of acute stress reaction.

### **Anxiety**

HCWs may develop anxiety and fear due to various risk factors including those related to work and lack of adequate support.<sup>20</sup> The anxiety experienced can have cognitive, behavioral and physical component. Cognitive symptoms include constant worries, decreased attention, and concentration and fearful anticipation of extreme or worse outcomes. Physical symptoms include signs of autonomic arousal like palpitations, dryness of mouth, epigastric discomfort, tremors, headache, or aching muscles, etc. Behavioral component includes avoidance behavior, irritability and restlessness. The symptoms of anxiety may arise for the first time during the times of crisis or there can be an exacerbation of pre-existing psychiatric condition. Medical HCWs have been reported to experience an increased prevalence of anxiety, insomnia and depression.<sup>26</sup>

### **Depression**

Depressive symptoms are also common in the HCWs involved in delivering services to COVID-19 patients.<sup>8,25,26</sup> There can be an exacerbation of symptoms in those already suffering from psychiatric disorders. Common symptoms of depression include disturbed sleep and appetite, low mood, decreased interest in previously pleasurable activities, poor attention and concentration and easy fatigability. An inability to help the patient in the crisis may also lead to ideas of guilt, shame, or self-harm.<sup>25</sup> There can also be cognitive component of feeling helpless, hopeless, and worthless.<sup>27</sup> When the symptoms are many and florid and distressing, interfering in functioning, a diagnosis of depressive episode

can be made. The problem needs to be adequately addressed by timely pharmacological and psychological interventions.

### Substance Use Disorders

Tobacco and alcohol are among the commonly used psychoactive substances. There can be an increase in difficulties faced by those using or dependent on these substances. Tobacco use is quite prevalent in HCWs with a recent systematic review and meta-analysis reporting a pooled prevalence of 21%.<sup>28</sup> Studies on alcohol use and dependence in HCWs are limited. Some studies have reported hazardous or harmful drinking in approximately 4 to 6% of the HCWs.<sup>29</sup> With the lockdown in place, restrictions in procurement and work-related factors like longer duty hours and use of PPE can act as barriers in the use of these addictive substances. This can lead to minor withdrawal symptoms like irritability and restlessness in tobacco users and symptoms like nausea, vomiting, poor sleep, irritability, craving, fine tremors and signs of autonomic hyperactivity in those taking alcohol. For those consuming these substances in a dependent manner, the withdrawal can be severe resulting in coarse tremors, seizures, and delirium tremens which would require emergency management.

### Post-Traumatic Stress Disorder

Besides the commonly encountered mental health issues, there is a possibility of development of PTSD later in those involved in COVID-19 duties. The projections come from past experiences with SARS and Middle East respiratory syndrome (MERS) outbreak.<sup>9</sup> Based on previous research, some researchers expect that with increasing deaths and other risk factors leading to psychological trauma, the rates of PTSD may rise above 10% in the current pandemic.<sup>9,11,30</sup> Moral injury in the form of a perceived inability to help the patient may also contribute to the development of PTSD.

### Other Psychiatric Symptoms

A higher prevalence of insomnia, anxiety, depression, somatization and obsessive-compulsive symptoms has been reported in medical health workers as compared with non-medical health workers in a study from China. The authors also reported that those who had risk of coming in contact with COVID-19 positive patients had a greater risk of developing obsessive compulsive symptoms. Presence of a comorbid organic disease was a risk factor associated with insomnia, depression, and obsessive-compulsive symptoms in nonmedical health workers.<sup>26</sup>

## Managing Mental Health Issues

HCWs caring for patients with COVID-19 experience significant psychological distress and mental health issues which need to be addressed.<sup>31</sup> There is a growing need to prepare the HCWs for the mental health crisis and build up their resilience. The mental health problems can be dealt both at an individual level as well as at the level of team leaders and organization.

### Management at Individual Level

At an individual level, HCWs can involve themselves in various activities that help in promoting their mental health. Some general guiding principles include maintaining a regular routine, adequate sleep and regular food intake. A schedule of regular physical exercise, deep breathing exercises, meditation, yoga, or religious activities depending on individual preferences can help the individual HCW in decreasing levels of distress and burnout. One needs to stay in touch with family and friends through phone or social networking platforms and discuss and share one's worries and feelings with them including talking about things which one finds pleasurable, other than work.<sup>32</sup>

Messages to the HCWs, as outlined below, are helpful.

- Ensure that the loved ones are fine by talking to them rather than overthinking about the situation.
- Take pride in the work you are doing and try to rationalize your fears about getting infected and the risk of transmitting infection to your family members.
- Avoid using negative coping strategies like use of tobacco, alcohol and other drugs.
- Take breaks in between from COVID-19 news and rely only on authentic sources.
- Everyone in the battle with the pandemic experiences these problems and one is not alone. But at the same time, be aware of your condition and if the distress is interfering with your social and occupational functioning, do not hesitate in seeking expert opinion and help.

### Management at the Level of Team Leaders

The team leaders have a challenging role to play when handling crisis situations. But looking at the positive aspect of this, they emerge stronger and more confident after they have adequately handled the situation. The leaders need to be open for a bidirectional conversation with health care personnel working under their leadership.<sup>10</sup> They need to empower their staff and be humble and provide them accurate information. Leaders can encourage staff to share their concerns and fears with them, so that both can work collectively to explore possible solutions. Adequate training of staff and matching them to the roles based on their work experience is essential. Equally essential is staff rotation from high stress to low stress jobs.<sup>31</sup> They can ensure that early support is provided, and confidentiality is maintained. If there is need for expert help or detailed assessment, the HCWs can be referred to mental health experts for the same. Ensure that information of available help options is available with the staff. The HCWs should be given adequate breaks from the COVID-19 duties.

Availability of support from family and colleagues, validating and appreciating the contributions made by staff, and providing a supportive environment are likely to have positive impact on the mental health of HCW.<sup>33</sup> System of buddies as in armed forces can be helpful. A buddy can be a colleague, senior, or any other staff who may be expected to provide support, monitor stress and maintain confidentiality.<sup>34</sup> It is also essential that the team leader uses this opportunity to

learn and create a meaningful narrative after the crisis is over, so that the resilience is built up. Aftercare also needs to be ensured by continuing monitoring of staff for emerging new symptoms or the continuing symptoms.

### Management at Organizational Level

Organizations need to ensure that work-related stressors are adequately managed like ensuring availability of PPE, providing transport and resolving accommodation difficulties faced by staff, equitable distribution of resources, and being available to address the concerns of staff and boost their morale. The organizations can hold meetings with team leaders to stay updated about the concerns of staff. Focus should not only be on providing help for mental health problems as they emerge, but also on preventing their occurrence.

### Specialized Psychological Support

If the mental health issues do not resolve on their own and the complaints are more pervasive and persistent and lead to disturbed functioning or compromised quality of life, special intervention should be provided. This includes referral to a mental health professional, conducting a detailed assessment and tailoring the treatment, if required, to the needs of the individual. Common indications requiring referral include risk of harm to self or others, onset of psychotic symptoms, and excessive consumption of substance of abuse. Nicotine replacement therapy can be offered for tobacco dependence. Pharmacotherapy and psychotherapy can be offered to the affected person, depending on the needs and preference.

### Conclusion

As we continue our battle with COVID-19, we need to focus on the mental health of our HCWs who are working at the forefront. Mental health problems are expected to arise, and adequate support needs to be provided to combat it. The role of mental health professionals in this fight is both crucial and challenging as they cater to the increasing psychological support needs of HCWs with limited resources in terms of trained staff available throughout the country. A concerted effort for service provision at both individual and organizational level needs to be achieved quickly. Utilization of technology infrastructure to create accessible and flexible service delivery, and a plethora of strategies need to be utilized to provide the greatest benefit to the largest possible numbers.<sup>35</sup> The focus should be on mental health promotion and prevention as well as early identification and management of these mental health issues.

#### Conflict of Interest

None declared.

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