

Health Care Worker's Health during COVID'19 Pandemic: The Key to Quality Health Care

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Tedros Adhanom, WHO Director-General has said. "No country, hospital, or clinic can keep its patients safe unless it keeps its health workers safe.

While surgeons across the globe try to comprehend the evolving facade of the COVID-19 pandemic and improvise surgical practice to the best of their ability, evidence has shown the psychological and physical impact of the stress on their own mental health and well-being due to their role in providing care to patients during COVID-19 [1].

There are three key health areas that require attention [mentioned below].

The impact of COVID-19 on mental health

Surgeons and trainee doctors from various surgical disciplines had been redeployed to cover on COVID wards and work in the frontline areas to help with rising demands because of the surge in patients. The stress of having to come out of the comfort zone of usual practice into a high-risk unknown environment at a short notice can be very overwhelming, as it's already been documented that in China there were reported symptoms of distress and depression, respectively [2].

Importance should be given to the social and practical elements, associated with living through the social-isolation. Several areas of life are affected, including socialization with friends and family, engagement in other leisure activities and shopping, including that of essentials and groceries. Fundamentally, there is a detrimental impact on the freedom of movement and a risk of increased anxiety about the health and safety of friends and family. These factors when put together takes a huge toll on the emotional and mental health of Health Care Workers health. As the HCW especially wear the badge of self-denying with a huge honor. And for generations the concept of 'toughen up' has been prevailing, but now studies and evidence show that HCW and doctors are no exemption when it comes to mental and physical health [3].

There is evidence that interventions for work stress can be effective in HCW [3]. WHO Recommends establishing policies to ensure appropriate and fair duration of deployments, working hours, rest breaks, and minimizing the administrative burden on health workers [4].

Recommendations by WHO Are Below for Mental Health Measures.

- Insurance coverage for work-related work.
- Access to mental well-being and social support services for HCW.
- Pray as per faith/belief. Pause, step back and reflect, retreat into a private space for a moment, gather your thoughts, speak

to a close friend, write/record your feelings and thoughts. cry if you want to

- Engage in an activity that makes you happy. (eg yoga, meditation etc)
- Stay updated on the current guidelines and evidence published
- Do not be overwhelmed by social media/news [3,4].

Prevention from Infection During COVID '19

One should perform as many tasks as possible in areas away from the patient-area like charting and adding notes in the patient records. While performing a necessary physical examination, proper personal protective equipment (PPE) must be used like, gloves, face mask, eye/face shield, etc.

The examination should progress from clean body areas to the contaminated. Limit opportunities for touch contamination e.g., adjusting glasses, rubbing the nose, or touching face with gloves that have been in contact with the patient until thorough hand washing/disinfection has been done. Every procedure on the admitted patients e.g., catheterization, nasogastric tube insertion, IV cannulation, etc. must be performed with great care ensuring personal safety by wearing PPE [1,3]. Only relevant staff should accompany during consultant visits to the patients.

A safe distance must be ensured during patient bedside round. Bedside teaching must be limited and preferably done in a specified area ensuring all the elements of personal safety [3]. The surgical workforce may be subdivided into small teams. The inpatient care team is expected to participate in daily rounds, ward patient management, admissions and discharges, and documentation. The operating care team should work in theatre, coordinate operative care of patients, perform assigned operations, then sign patients off to surgical residents working on the inpatient care team.

Similarly, the outpatient care team can look after patients visiting the outpatient department. Guidelines for isolating healthcare workers in case of exposure must be followed to prevent further spread. We can all limit this disease by following precautions and staying up-dated through valid resources [5].

Now that vaccines have rolled out, vaccination of health care workers is the first most priority.

WHO Recommendation:

- Ensure the implementation of infection prevention and control, and occupational safety standards in all health care facilities.
- Ensure availability of personal protective equipment at all times, as relevant to the roles and tasks performed, inadequate quantity and appropriate fit, and of acceptable quality.
- Ensure adequate environmental services such as water, sanitation and hygiene, disinfection, and adequate ventilation for HCWs.
- Ensure vaccination of all health workers at risk against all vaccine-preventable infections, including Hepatitis B

and seasonal influenza, in accordance with the national immunization policy, a priority access for health workers to newly licensed and available vaccines.

- HCW should be prioritized for viral testing [5].

Physical health

As doctors and HCW we have traditionally neglected their own health in favor to our professional and personal obligations. The culture of medicine has been promoting the belief that physicians can never be sick; doctors are archetypically very independent, competitive, and high achievers, and we often view our attention to our own needs as a sign of weakness [2].

But now there is a shift in the attitudes and perspectives regarding this and increasing attention is now being paid to physician health. Self-care is now considered a core competency by the Royal College of Physicians and Surgeons of Canada, as physicians are expected to “demonstrate a commitment to physician health and sustainable practice” [2].

Medical associations are beginning to recognize and realize the demands of the profession and the possible health risks involved, and many have created programs to address the health care needs of their members. Now we are recognizing that the health of doctors and HCW directly impacts the health of the larger population, as numerous studies have established a link between the health behaviors of physicians and their interactions with patients [2].

At present, the vast majority of research in the area of physician health is focused on three areas: 1) work-related stress and burnout, 2) mental health disorders such as depression and suicide; and 3) substance abuse. In contrast, there has been less research to date into lifestyle behaviors and preventive health care among physicians [6].

The 2007 Physician Health Survey conducted by E. Frank and C. Segura, in conjunction with the Canadian Medical Association and several provincial organizations, is the largest and most comprehensive study of these issues to date. This and other studies have brought to light several aspects of physician health that warrant further attention such as nutrition, exercise, sleep, and self-care. These are issues that affect every physician on a daily basis [6].

Not all doctors will ever have to deal with substance abuse or depression, but all face the challenge of incorporating healthy preventive habits into their busy lives. Increased focus on healthy daily living among physicians could help prevent the progression to serious health issues, including mental health problems and addiction [6].

Following are the areas to reflect on in terms of physical health.

Nutrition

The need for increased focus on healthy eating habits becomes more and more prominent. It appears that Doctors/HCW, like the

rest of the population, could apply some improvement in their diets.

Canadian physicians report an average daily consumption of 4.8 servings of fruits and vegetables, with over half of physicians eating the minimum five recommended servings.

Studies with both American and Canadian physicians show a strong personal-clinical relationship in many aspects of health care counseling such as nutrition, exercise, smoking, and alcohol. Physicians who eat a healthy diet themselves are more likely to counsel their patients about the importance of proper nutrition; furthermore, this counseling is more likely to be effective at inciting positive behavioral changes in patients. Because of this link, it would be extremely valuable to initiate programs promoting proper nutrition among physicians and advocating the benefits of diets high in fruits, vegetables, and unprocessed whole foods [6].

In addition to overall diet, the issue of workplace nutrition has recently received some attention. Physicians repeatedly report that they often do not eat or drink properly, during working hours.

Evidence shows that inadequate nutrition had some impact on them at work. Most cited emotional symptoms such as irritability and frustration; many also cited physical symptoms (lightheadedness, tremor, nausea) and cognitive effects (difficulty concentrating, poor/slow decision making). These findings are alarming given inadequate nutrition among physicians, as they may result in decreased quality of patient care and medical error [6].

Identifying barriers to proper workplace nutrition. The most commonly cited barrier is lack of time due to excessive workloads and work scheduling (e.g., frequent lunchtime meetings). Many physician lack of access to healthy food, especially those working outside of typical business hours (when the hospital cafeteria is closed at night, for instance). Inadequate food storage and lack of healthy choices were also identified as issues. Furthermore, physicians described barriers that reflect the culture of medicine and its lack of prioritization of personal wellness.

Addressing the barriers to proper workplace nutrition should be a focus for all health care organizations and independent practitioners. Not only does proper nutrition benefit the individual physician, it also enhances the quality of patient care and ultimately increases the efficiency of the organization. Policies promoting regular lunch breaks, increased healthy food choices at hospital cafeterias, extended hours of food services to accommodate nighttime staff, and improved access to food storage areas are examples of simple changes that have the potential to provide significant benefits [6].

Exercise

Physicians, like the rest of the population, are not consistently meeting the recommended guidelines for physical activity. A minimum of 150 minutes of moderate-to-vigorous physical

activity per week for adults aged 18 to 65, with up to 300 minutes for maximum health benefits.

Though physicians get an average of 20 to 25 minutes per day of total exercise; however, mild exercise such as easy walking can be incorporated. Only about 15 minutes is either moderate or vigorous exercise, about half of the recommended minimum [2]. While the statistics among physicians may simply reflect a larger cultural problem, there may also be factors specific to medicine that discourages physical activity. A study of medical students showed that weekly exercise decreases throughout medical training, most likely due to increased workloads and long hospital shifts during the clinical years [6]. Increasing activity levels among physicians has the potential to benefit physicians, patients, and the health care system as a whole. BC's Walk with Your Doc initiative, attended by over 100 doctors and 2000 patients around the province, is an excellent example of a simple program that encourages regular exercise in both physicians and patients and allows doctors to serve as healthy role models in their community.

In addition, simple modifications to the workplace can be made to promote exercise, such as installing secure bike racks, having shower facilities on-site for those who exercise before work or during their lunch break, and encouraging team entries to events such as local walk/runs.

Medical students are a key demographic for interventions promoting health and wellness. A 4-year intervention study showed that medical students who received curricular and extracurricular education on diet, exercise, alcohol, and tobacco had improved personal health practices compared with controls.

In addition, these students were more likely to counsel patients about healthy lifestyle habits. Many medical schools already have student wellness programs in place, such as the University of British Columbia's Wellness Initiative Network, a coalition of programs aimed at promoting student health and wellness through nutrition, physical activity, emotional health, and community involvement [6].

These programs are valuable because they instill healthy habits such as regular exercise in students, with the hope that these habits will persist throughout their medical careers.

Sleep

One of the consequences of long work hours, shift work, and on-call duties is sleep deprivation, both chronic and acute. Half of general practitioner's report sleep difficulties, and almost two-thirds complain of exhaustion or sleepiness at least 3 days per week.

The majority of studies concerning sleep and sleep deprivation have focused on residents, as 80-hour work weeks (and longer) and shifts of up to 36 hours have traditionally made them the most at-risk group. Two-thirds of American resident's report sleeping less than 6 hours per night, with one in five sleeping less than 5 hours.

To address this, limits on resident duty hours, such as those imposed by the American Accreditation Council for General Medical Education (which caps weekly hours at 80) as well as the recent legislation in Quebec capping shifts at 16 hours, are designed to help combat the problem of both acute and chronic sleep deprivation in residents. However, the efficacy of these duty limits in reducing resident sleep-deprivation has not been conclusively examined, and some research has indicated that duty hour limits alone are unlikely to fully address the sleep deficits and resulting impairments reported by residents [2].

Furthermore, such duty hour limits raise additional areas of concern. First, the changes may adversely affect resident education; most American residency program directors, when surveyed, reported a “marked degree of concern about educating a competent generation of future physicians in the face of increasing duty hour standards and regulations.” In addition, cutbacks to resident hours means that health care facilities will have to find ways to cover the extra hours traditionally worked by residents, either by hiring additional staff or by increasing the workload of more senior physicians—both of which could prove especially challenging for smaller institutions with limited budgets. This area is in need of further research to guide policies that will best serve all members of the medical profession and promote optimal patient safety. Chronic sleep deprivation in physicians and residents is alarming because it has repeatedly been correlated with decreased cognitive performance, increased likelihood of medical error, and higher instances of self-injury such as needle sticks. Other studies have shown that moderate sleep deprivation—equivalent to about 18 hours without sleep—can be more incapacitating than being legally drunk [2,6].

Some research has begun to investigate ways to minimize physician sleep deprivation, focused on emergency department physicians, a group that is characteristically vulnerable due to shift work. It is suggested that patterns that would reduce sleep deprivation by allowing every physician at least 4 hours of constant “anchor sleep” per night, a technique that has been shown to maintain a consistent 24-hour cycle of sleep and wakefulness and to reduce fatigue. Implementing this kind of revised shift scheduling is one potential avenue for reducing sleep deprivation among shift workers such as ED physicians [2,6].

Self-care

Physicians are notoriously bad patients. One-third of Australian residents do not have a GP. Young Irish doctors had not been to see a physician (either their own GP or a walk-in clinic) in the past 5 years. Researchers in many countries including England, Australia, and Hong Kong indicate that a large proportion of doctors engage in self-treatment [6].

Furthermore, a significant number of physicians admitted to self-prescribing medications, a practice that is considered unethical by all medical associations and has been prohibited by legislation in certain jurisdictions.

Over one-third of Australian residents reported self-prescribing in the past year, and 92% of Irish physicians had self-prescribed at least once in their career. Rates of compliance for screening tests such as blood pressure measurement, mammography, Pap smears, cholesterol checks, and prostate examination varied from 60% to 85% among Canadian physicians, suggesting that not all physicians are taking the recommended measures. Physicians commonly rely on denial and avoidance when faced with personal medical problems. Physicians very often do not seek help, even though they may realize that they need it; one study showed that only 2% of Canadian doctors who were identified as depressed had sought treatment [2].

The dominant idea in the medical profession is that physicians are never ill, and, if they do fall ill, they should silently work through their illness and put patient care above all else, also physicians may also feel pressure from both their patients and their colleagues to appear well, as their own physical health is taken to be an indicator of their medical competence. There is a definite need to continue to promote self-care in the medical profession and to debunk the myth of the infallible physician. All physicians should have their own GP who can provide regular, continual, and effective care; this would avoid the issue of self-prescribing and ensure that physicians are taking the recommended preventive screening measures [6].

Several countries have programs in place that match physician-patients with general practitioners, such as Norway’s Physicians for Physicians program and Britain’s Doctors for Doctors Unit. At present there is no such program in many countries, and this could be an area for future growth. Programs aimed at matching medical students or new residents with a family doctor might be particularly effective, as these groups are less likely to have their own GP [2].

WHO Recommendations:

- Short active breaks during the day. Dancing, playing with children, and performing domestic chores such as cleaning and gardening are other means to stay active at home.
- Follow an online exercise class. Take advantage of the wealth of online exercise classes. Many of these are free and can be found on YouTube. Walk. Even in small spaces, walking on the spot. If you have a call, stand or walk around while you speak, instead of sitting down. You may walk outside by taking precautions.
- Reduce your sedentary time by standing up whenever possible. Ideally, aim to interrupt sitting and reclining time every 30 min.
- WHO recommends drinking water instead of sweetened beverages? Avoid alcoholic beverages and smoking. Ensure plenty of fruits and vegetables. Good nutrition is crucial for health, particularly in times when the immune system might need to fight back [3,7].

Studies have shown that meditation and deep breaths can help you remain calm and relaxed. Eat a balanced meal and get enough

sleep [3]. By following simple steps to improve your health and immunity you can protect yourself and your loved ones.

In order to provide quality health care and a patient centered care we must remember that in order to provide quality health care the HCW who are the deliverers of the quality health must have good health.

Evidence on the health impacts of COVID-19 on HCWs. Evidence suggests HCWs are susceptible to various health consequences due to the COVID-19 pandemic. For those with COVID-19 infections, the most common symptoms were fever and cough, which were similar to those seen in the community. Several risk factors were identified; long duty hours, working in the high-risk department, lack of PPE, diagnosed family member, and unqualified hand-washing and improper infection control. Furthermore, prolonged PPE usage led to skin damage, with the nasal bridge being the most common site. Battling COVID-19 on the frontline makes HCWs vulnerable to psychological distress. Finding shows high levels of depression, stress, anxiety, distress, anger, fear, insomnia, and post-traumatic stress disorder in the HCWs. Females and nurses were disproportionately affected more from mental health consequences. Frontline female nurses work in close contact with patients for longer working hours, which may result in fatigue, stress, and anxiety. However, this finding warrants for further research to better prepare for the future [2,3].

Worldwide, COVID-19 has affected large numbers of frontline HCWs. As of March 2020, COVID-19 has infected more than 3000 HCWs in China only. A similar situation was witnessed in previous outbreaks of Ebola virus disease (EVD), Middle East respiratory syndrome (MERS), and severe acute respiratory syndrome (SARS). Figures from Sierra Leone, Liberia, and Guinea showed approximately 6–8% of Ebola infection amongst the HCWs, SARS infected approximately 1000 HCWs, and 1.4% deaths occurred in China only. Early COVID-19 studies indicate a worrisome situation of morbidity and mortality. The fact that healthcare workers are at increased risk of infection by COVID-19 will further exacerbate the existing shortage of skilled workforce, as most health systems and EDs are running at their full capacities [2,6,7].

During outbreaks, the HCWs experience considerable stress. In a Chinese study during the Ebola outbreak, HCWs reported extreme somatization, depression, anxiety, and obsession-compulsion. During the MERS outbreak, a Saudi study reported almost two-third of HCWs felt at risk of getting infected with MERS CoV and felt unsafe at work. These findings are consistent with previous SARS situations in which HCWs reported high levels of fear of contagion and infecting family members, emotional disturbance, uncertainty, and stigmatization. Risk factors for mental health include overwhelming situations, social disruption of daily life, feeling vulnerable, at risk of getting infected, fear of transmitting the disease to families, and loved ones. Previous outbreaks showed that HCWs suffer significant stress, and a similar outcome is expected in COVID-19 [6].

One of the major challenges faced in controlling this pandemic is the extreme shortage of PPEs. A highly infectious pandemic challenges already compromised health systems with resultant shortages in supplies and PPEs. In a pandemic, ensuring emergency medical supplies is pertinent to national public health emergency response systems. Therefore, it is pertinent to establish an emergency reserve medical supplies program to ensure the provision of supplies based on needs, type, quality, and quantity [2].

Conclusion

While there is increasing recognition of the importance of physician health, there are few large-scale programs targeting lifestyle behaviors in physicians/HCW. Most programs address crisis situations such as substance abuse or mental health disorders, but do not focus on daily healthy living. Through evidence we can to recognize the importance of preventive medicine in the general population, and physician health should be no exception to this.

Given that interventions targeting preventive health care issues such as proper nutrition and regular exercise have been shown to positively impact both the personal health of physicians and their counseling practices, these would be a worthwhile investment for health care systems. In addition to targeting current practicing physicians, programs aimed at medical students could have a significant impact on students' future health practices and patient interactions.

Overall, there is a need for continued promotion of physician health. We need to dispel the myth of never-ill physicians who place the needs of their patients before their own to the detriment of their own health. The culture of medicine must shift away from its highly competitive, individualistic emphasis on excessive workloads and extreme self-sacrifice and embrace changes that promote optimal physician wellness as an avenue to improved patient care. Until such a shift occurs, improving physician health will be an uphill battle [4,7].

Pandemics exert significant psychological impacts on HCWs, highlighting the need for appropriate psychological support, interventions, and staff support measures. COVID-19-specific psychological interventions for medical staff in China included psychological intervention support teams, psychological counselling, availability of helpline, establishment of shift systems in hospitals, online platforms for medical assistance, incentives, providing adequate breaks and time offs, providing a place to rest and sleep, leisure activities such as yoga, meditation and exercise, and motivational sessions. Protecting the well-being of HCWs, through appropriate measures is a crucial tool in international emergency public health response to fighting the outbreaks. If timely measures are not taken, although the disease will subside eventually, a new surge of patients suffering from psychological morbidity will emerge [2,6].

Standard abbreviation used: HCW: Health Care Workers.

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