REVIEW ARTICLE

WHAT THE PAST HAS TAUGHT US: BEST PRACTICES FOR OFPS TO MANAGE STRESS DURING A VIRUS OUTBREAK

Tina Chuong, DO, MMS[1]; Karen Lazarus, DO, MPH[1]; Meera Shah, DO, MBA[1]

[1]Abington-Jefferson Health Family Medicine Residency Program, Abington, PA

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ABSTRACT:

OFPs and other health care professionals experience increased rates of stress, anxiety, fatigue and burnout in the face of pandemics. Historically, this has been observed with other pandemics, such as the influenza pandemic, HIV/AIDS, SARS, H1N1, Ebola virus disease and, more recently, COVID-19. Research about physician wellbeing during prior pandemics has informed recent practices and provides more guidance on how larger health care entities can provide for employees and how physicians can care for themselves. Here, we explore best practices for emotional/spiritual wellbeing, physical wellbeing, maintaining a healthy family life and wellness during a virus outbreak.

INTRODUCTION

Osteopathic family physicians (OFP) play a large part in public health crises, such as infectious disease outbreaks. However, many OFPs report not feeling prepared. Research shows that OFPs express concerns for the limit of support from health authorities on education, training and supply of personal protective equipment (PPE).[1] This can lead to significant long-term stressors, so managing the stress and psychological distress during infectious disease outbreaks will be an integrative part of preventing burnout and improving wellness.

HISTORICAL PERSPECTIVE

There have been multiple historical accounts of health care provider distress in times of pandemics. These include influenza pandemics, the spread of HIV/AIDS and newer pandemics, such as H1N1 influenza, SARS-associated coronavirus and Ebola virus.

Influenza pandemic of 1918

Also known as the Spanish Flu, the H1N1 influenza outbreak of 1918 lasted over two years and infected 500 million people—roughly one-third of the world's population.[2] This particularly virulent strain of influenza placed enormous strain on the health care system worldwide. Although more than a century has passed, health care providers' sentiments caring for these influenza patients and those caring for COVID-19 patients are eerily similar.

In a letter written from Dr. Norman Roy Grist in 1918, a physician stationed at Camp Devens, Massachusetts, to a fellow physician, he states:

"We have lost an outrageous number of nurses and doctors and the little town of Ayer is a sight. It takes special trains to carry away the dead. For several days there were no coffins and the bodies piled up something fierce.
We have no relief here; you get up in the morning at 5:30 and work steady till about 9:30 p.m., sleep, then go at it again. Some of the men of course, have been here all the time and they are tired."[3]

A 21-year-old Jean Curlewis, who was volunteering as a nurse's aide away from her family during the influenza outbreak of 1918, writes to her mother about the fear of spreading the virus to her family if she were to return home.

"On the whole, though I long to see you all, I think I would rather not spend the subsequent nights worrying myself sick for fear I had given it to you. You know I am not given to imaginations in worrying, but up here, all the girls find it almost unbearable to think that people belonging to us might get this awful thing, through lack of precaution." [4]

During the COVID-19 pandemic, health care workers (HCW) have gone to great lengths to protect themselves and contacts from becoming ill. Yet, many health care providers have been infected with COVID-19 or know of health care providers who have been ill. This is much like what was seen at the onset of the COVID-19 pandemic when HCWs exposed to the virus often separated from their families to keep them safe.

CORRESPONDENCE:
Tina Chuong, DO | tina.chuong@jefferson.edu

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HIV/AIDS pandemic

There are multiple accounts of physicians providing care to patients at the onset of the human immunodeficiency virus (HIV) pandemic who grappled with fear of dying, fear of acquiring the virus themselves and fear of lifestyles that were considered "alternative." Stressors on the job included feeling manipulated by patients who did not change their high-risk behaviors, did not heed precautions, arrived late for appointments or took advantage of physicians by selling their medication or using them for social benefits. Additionally, physicians noted that receiving decreased institutional support was a major source of stress. Partially brought on by changes in health care—namely the transition to managed care—decreased institutional support included fiscal cutbacks, decreased nursing and support staffing and lack of resources for patient care.[5] Physicians endorsed burnout exacerbated by the demands of managed care and distress over-discharging patients early from the hospital, despite their persistent needs for substantial nursing and medical care. Clinical depression, emotional distancing and marital issues were also manifestations of physician burnout. Coping strategies included taking more time away from work, saying "no" to additional obligations, sharing their workload, leaning on others for support and getting better at work-life balance.[4]

SARS pandemic

In 2003, severe acute respiratory syndrome (SARS-associated coronavirus) spread to more than two dozen countries in North America, South America, Europe and Asia. Wong *et al*. [5] describe how primary care physicians of the Hong Kong and Toronto health systems responded to the outbreak. In Hong Kong, physicians endorsed little guidance regarding diagnosis and treatment of the virus and had difficulty advising anxious patients. In Toronto, three major hospitals were closed and HCWs were quarantined, resulting in staffing shortages. In both cities, 80% of the practitioners surveyed experienced reduced incomes and increased overhead costs. Approximately 50% of the practitioners from both cities were considered high anxiety.[6] Family physicians in Hong Kong were significantly less satisfied with how their government handled the outbreak than those in Toronto. This dissatisfaction was related to a younger age, more clinical duties and increased frequency of changing screening tools. The authors infer that primary care physicians would benefit from increased training and communication during pandemics.

H1N1 (Swine Flu) pandemic

During pandemic times, there is an increased demand for HCWs, as was seen with the H1N1 influenza pandemic in 2009. Several studies have evaluated the factors that influence HCWs' willingness to work during pandemics. These factors include type of disaster, concern for family or personal safety, education and training, belief in a duty of care, access to PPE and basic needs (water, food, rest, electricity, shelter and communication tools). [7,8]

Aoyagi *et al*.[8] found that health care willingness to work during the H1N1 influenza pandemic ranged from 23.1% (in community nurses during the 2009 H1N1 pandemic in Hong Kong) to 95.8% (seen in a study of U.S. medical students presented with a case of hypothetical H1N1 outbreak). Their analysis shows that HCWs are more likely to work if presented with hypothetical influenza scenarios and limited details. Lower levels of willingness were associated with precise scenarios and information on the influenza virus's strain and virulence. More so, they found that factors associated with being more willing to work in an influenza pandemic included: being male, being a physician (compared to nursing and other HCWs), working in a rural environment, being a full-time employee, not having children or childcare obligations and not being pregnant.

Ebola epidemic

Health care workers caring for patients through the Ebola epidemic faced known challenges, such as deprivation of resources, mistrust of the medical community and lack of public health funding. However, the more recent outbreak spanning 2014–2016 posed unique challenges—mainly spreading within urban areas, overwhelming individual health care providers. Fatality rates among the public were less than that of HCWs—41% in the general population and 58% of HCWs, although the proportion of HCWs who died is much smaller.[9] Nevertheless, physicians and other HCWs caring for sick patients incur substantial risks doing so. This is compounded when basic supplies such as water, power and PPE are lacking.

At the American Society for Nephrology's annual conference in 2014, Dr. Nicolas Evans discussed the ethics of treating patients with Ebola virus disease (EVD) on an ad hoc panel. They concluded that physicians and other HCWs have a duty to provide for patients, colleagues and the community. Yet, professional duties may be conflicting with the duty to their wellbeing or family. However, the risks HCWs take honoring the duty to treat must be mitigated by better planning for public health emergencies, particularly in resource-rich countries where there is more capacity to do so. The committee acknowledged that areas where resources are limited have providers "are likely to find themselves in untenable positions, where their rights to welfare are overshadowed by the compelling need to treat patients and respond to an outbreak. The right to welfare means little, even to the most self-interested person, if absenteeism only risks the individual more through the continuation of an emergency." [9]

COVID-19 pandemic

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), now simply known as coronavirus disease 2019 (COVID-19), has become a global pandemic that overwhelmed health care systems worldwide. Globally, there have been over 40 million cases of COVID-19 and 1.12 million deaths. In the United States, there have been over 29 million cases and over 573,000 deaths.[10] Before the pandemic, rates of physician "burnout" in the United States neared 50%[11] and rates have increased in the face of COVID-19-related stressors. These include fear of infection and putting self or family at risk, lack of PPE and changing of U.S. Centers for Disease Control and Prevention (CDC) guidelines for recommended PPE, ethical dilemmas regarding resuscitation status and distribution of medication and ventilators,[12] feeling physically and emotionally drained as a result of being "over-worked" and not having access to usual coping mechanisms, such as a gym, movies or social gatherings with family and friends.

It is important to recognize that the responses to disasters such as COVID-19 can vary and span from an acute stress reaction to post-traumatic stress disorder (PTSD). The physical, cognitive, behavioral and emotional manifestations that result from these conditions are vast and can include pain, palpitations, detachment, substance use, mood disturbance, flashbacks, poor concentration and rumination, among other symptoms.[13] As a result, individuals, as well as whole organizations, have been organizing to call for support of physician wellness at the policy and institutional level.[14]

With a better understanding of the scope of physician wellness, we hope to help identify barriers and promote solutions. Here, we outline several subsets of wellness—emotional and spiritual wellness, physical wellness; family life; and resident wellness—and propose strategies for managing stress and duress during the COVID-19 pandemic.

WELLNESS

Emotional/spiritual wellness

Research has shown that staff who have been quarantined reported psychological symptoms including emotional disturbance, depression, stress, low mood, irritability, insomnia, anger, emotional exhaustion and post-traumatic stress symptoms.[15] Individuals who respond to natural or human-made disasters experience death, injury and destruction with prolonged work environments. Research studies identify these individuals at risk for psychological distress and post-traumatic stress.[16] Furthermore, a study after the severe acute respiratory syndrome outbreak showed a positive association with quarantined health care workers and alcohol abuse or dependency symptoms, especially in those who worked in a high-risk location.[17] Providers can fear their own health or fear infecting others, such as family members, friends and co-workers. Financial loss can lead to anxiety. Quarantined HCWs may feel stigma for creating understaffing or extra work for colleagues.[1] To prevent these concerns, mental health care for OFPs should be emphasized. OFPs should remember to take breaks and schedule time for themselves. There should be a focus on healthy meals, rest and sleep. Spending time with family and friends by phone or videoconferencing can help alleviate isolation. Additionally, seeking support through therapy or group sessions can be a way to focus on mental health.

Physical wellness

Exercise has been shown to improve mood, cognitive function and alleviate social withdraw. Several types of aerobic exercises, like jogging, walking and dancing, can reduce anxiety and depression.[18] During a pandemic, normal exercise routines may be disrupted when facilities are closed. OFPs who routinely use exercise facilities should develop at-home exercise regimens. Investing in equipment, such as exercise bikes and weights, can help OFPs keep a physical activity schedule. Additionally, outdoor activities like jogging and running are a safe way to distance themselves socially. Mobile health and fitness applications can help OFPs find home exercises and participate in virtual exercise routines.

Family life

OFPs experience stressors with marriage, children and family regularly. During an infectious outbreak, these stressors may be heightened. A supportive home environment is essential in maintaining physician wellbeing. A survey of family medicine graduates found that most OFPs manage stress by talking to family or friends.[19] OFPs should communicate with their partners regularly about work schedules to adjust to frequent changes. Families should work out a childcare schedule, especially as there is a shift toward virtual learning. Many OFPS may also struggle with caring for patients and returning home to families with fears of infecting loved ones. To reduce anxiety about spreading the virus, OFPs can take several precautions like changing clothing before entering homes and good hand hygiene.[20]

Residency wellness

Family medicine residency training programs require three years of training with rotations into ambulatory, community and inpatient settings.[21] During pandemics, duty obligations increase mental and physical strain for residents. Family medicine residents are at increased risk because of their exposure to viral outbreaks in various settings. Residents may be working in the inpatient sites, including intensive care units and ambulatory sites, evaluating sick patients. Therefore, prioritizing wellness for residents is very important. The surgical program at the University of British Columbia evaluated their program for the efficiency of practice, the culture of wellness and personal resilience during the COVID-19 pandemic. Their strategies to improve resident wellness include talking about signs of burnout, establishing committees to support residents, regular virtual meetings, maximizing safety with PPE and journaling. They also established a reserve team to minimize resident-to-resident contact and rotated their residents into different blocks.[22] These methods can be initiated in family medicine residencies to help manage stress and alleviate psychological distress.

CONCLUSION

OFPs and other health care professionals are in increased demand during pandemics and observe a duty to provide care. However, this is often at the expense of their wellbeing and health. While this has been observed and studied through several pandemics over the last century, newer data has emerged that can be used to help mitigate stress, fatigue and burnout observed with the COVID-19 outbreak. Physician emotional/spiritual wellness can improve by focusing on a healthy lifestyle (healthy meals, rest and sleep) and maintaining relationships with friends and families through videoconferencing and phone calls. OFP wellness can improve by establishing at-home gyms, using fitness applications and exercising outdoors. OFPs can maintain a strong family life by keeping open communication about changing work schedules and other work-related stressors. For OFPs, it is important to recall how the tenants of osteopathic medicine and the osteopathic oath promote wellbeing. In the 2019 *Osteopathic Family Physician* article "Physician Wellness, Osteopathic Principles and Strategies for Change," Dr. Katherine Lincoln[23] demonstrates that working

past one's physical, emotional and spiritual threshold can violate the osteopathic tenant that "the body is a unit and the person represents a combination of body, mind and spirit." It is critical that health care providers do not sacrifice their own health when providing care and providers should seek help from their communities.

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