The Importance of Resilience and Resolution in the COVID-19 Era. A Surgeon's View

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Introduction

The COVID-19 pandemic remains a disaster with multiple harmful consequences in the world. This pandemic has changed the face of medicine and we, as a medical community, are trying to battle a virus causing devastation at multiple levels. The situation that we experience could easily be characterised as surreal. Our life can change so suddenly and so radically by a virus that we cannot see, and still this can cause such enormous harmful consequences. In the case of a natural disaster (e.g. earthquakes, floods) we can see the damage. Now, during the pandemic, if we look outside our windows, the world looks perfectly normal but the images that make us realise how threatening this situation is, are the ones we see on television of emergency rooms and the hospitals that are overwhelmed.

During this period, we find ourselves to recruit an internal power and we apply strength and skills in our lives that we did not know we had. As human beings, we have a long history of biological evolution that it has equipped us with tremendous potential for resilience. As we trace our strength, we discover that we have reserves... and much more.

The pandemic and its associated stressors may have serious mental health consequences in a way that our "normalcy" changes. Facing a such a new reality, we need to answer questions such as: How the post pandemic "normal" looks like or whether our society will prove to be resilient? [1].

Mechanisms of resistance to stress

As we try to recover looking for new balances in our social, cultural and professional daily practices, terms such as **resilience and resolution** are two of the words that dominate in our lives.

Although resilience refers to positive adaptation to adversity, there are different perspectives on how to exactly define resilience. Resilience is defined as the capacity of a system, whether that system is a person, a family, an economy or a community to adapt successfully to chal-

lenges that have threatened the functioning, the survival or the development of that system.

In the middle of this catastrophic pandemic, there is convincing evidence, that we all depend on the resilience of many systems in our lives. Now, we realise how interdependent we are, and how much we depend on the support of other people.

Under these circumstances, our well-being as surgeons is of outmost importance.

Physician's well-being and adaptation to adversity

The major domains that contribute to a surgeon's well-being are:

- a) **The efficiency of the practice.** An efficient practice is the one where there is an obvious effort to mitigate our fatigue, to streamline the clinical workflow, and to adequately support the staff along with the reduction of administration burden.
- b) **The institutional culture of wellness.** Basic components of the hospital-institutional culture of wellness are the appreciation and recognition, the sense of community and the supporting for self-care.
- c) **The personal resilience.** Personal resilience can be achieved by coping healthy strategies or applying techniques for stress reduction and emotional regulation (such as mindfulness) and self-compassion.

These three are considered as key factors for avoiding burnout during stressful situations [2].

Taking the example of other demanding and stressful professions such as aviation and education, both have taught us about interventions necessary to improve the wellness of their professionals. These interventions can be divided into three levels:

- a) **Individual.** At individual-level, cognitive behavioral techniques have been shown to enhance development of awareness, provide a coping mechanism for managing difficulties, and increase emotional well-being by reducing anxiety and depression [3,4]. In randomised controlled trials, contemplative practices like yoga and meditation were found to decrease burnout, increase mindfulness, lessen the impact of negative emotions, decrease the physical symptoms of stress, improve emotional well-being and improve professional efficacy [3–5].

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- b) Organisational-individual interface.** Interventions at organisation-individual interface, which focus on building workplace relationships and support, have been found to result in significant improvements in well-being. [3]. Workplace wellness programs, focused on nutrition or exercise, have been found to reduce health risk and health care costs.
- c) Organisational.** At this time, little data is available to indicate the impact that organisational initiatives directed at the culture of wellness have on professional wellness and performance [3].

Recommendations for moving forward

Based on the above information and in order to achieve a forward movement, our strategies, aiming to promote wellness and mitigate burnout, should focus on approaches that address both institutional issues, such as a culture of wellness and efficiency of practice, as well as personal resiliency [6-8]. These strategies need to be responsive and creative and not simply prescriptive.

The American College of Surgeons now offers access to a Physician Well-Being Index that allows members to complete an online self-assessment and track various measures of well-being over time, with free resources tailored to respond to the risks identified in the self-assessment [9]. The American Medical Association offers an innovative STEPS Forward program, designed to educate physicians about evidence-based individual- and organisational-level interventions to improve physician wellness [10]. These and other initiatives empower surgeons at all levels to alleviate burnout through increased engagement in shaping the culture of medicine and creating interventions to enhance an easy and efficient practice.

In summary, in maintaining and enhancing surgeons' wellness is an equilibrium between job resources and demands is necessary. This equilibrium can be achieved by keeping the balance between factors contributing to each one of them. Factors contributing to job resources are: culture of wellness and institutional support, both of them driving to wellness. Those contributing to job demands are: physical workload and emotional strain, both of them driving to burnout [4]. Eventually, keeping control of all these factors, a balance between wellness and burnout is an achievable target.

Professional and academic resilience

In order to preserve our professional activities as surgeons (clinical and academics), several approaches have been recruited. These approaches can be summarised in the following strategies: (1) Creating a safe environment for surgical care, (2) Considering the ethical impact of profes-

sional guidelines for surgery prioritisation, (3) Harnessing telemedicine to accommodate requisite physical distancing, (4) Understanding interactions between SARS CoV-2 and cancer therapy, (5) Redirecting the multidisciplinary model to guide surgical decisions) and (6) Advocating for our patients who require oncologic surgery in the midst of the COVID-19 pandemic [11].

In order to preserve our academic mission, we have already recruited new methods. The use of tele-mentoring is one of them. Formal surgical tele-mentoring is a concept within telemedicine that involves the use of information technology to provide real-time guidance and technical assistance for surgical procedures from an expert physician at a different geographical location. Previous studies have demonstrated no difference in knowledge and skill acquisition when comparing tele-mentoring and onsite mentoring. Tele-mentoring may be particularly important to trainees and younger faculty. In turn, partnering senior faculty with junior faculty and trainees via tele-mentoring can facilitate research and academic productivity, as well as maintain cohesion among faculty. Tele-mentoring / tele-teaching can also help maintain educational curriculum for trainees (students or residents) by using virtual journal clubs, Morbidity-Mortality conferences or research presentations [12].

Epilogue

At this time, I couldn't find a more suitable epilogue indicative of the mixture of feelings that dominate in our lives, during this stressful period than the following letter written by a retired surgeon and uploaded in the "Communities" of American College of Surgeons in the middle of the pandemic crisis [13]:

Santa Barbara, April 19, 2020

I am sharing today, because I imagine others (particularly other older surgeons) might be experiencing similar thoughts during these trying times, and, if so, may find some solace in knowing they are not alone.

I am 70 years old, no longer in clinical practice, and have been sequestering. It seems like it has been a long time. Hours, days, and then weeks have passed. While so much is happening in the world, for me little is happening. Like so many others, I occupy myself with activities of daily living, with spending time with my family, with trying to keep connected and find ways to be constructive and helpful on the internet, with doing my best to stay active and creative. I am doing what millions of others are doing and should be doing. I understand this. Nonetheless I cannot help but experience moments of feeling powerless,

moments of guilt, and moments of loneliness, longing, and of sadness. I write now not just to acknowledge these feelings, but also to share that, despite them, I ultimately feel positive and optimistic.

Like so many of you, my fellow retired surgeons, I looked upon my surgical work as important and noble. When I provided emergency care for severely injured patients, performed complex operations, or accepted cases no one else could help, I felt like I was fulfilling an important mission. I felt fortunate to possess the knowledge, skill, and opportunities to provide these services. My work gave me a sense of self-worth. And, if I'm being honest, I enjoyed the admiration and respect of others for my efforts. When I first retired from clinical practice, I felt a sense of loss, but I also had a sense of well-being from knowing that patients continued to receive great care from excellent surgeons, some of whom I had helped train. Then, suddenly and without warning, COVID-19 upset this sense of well-being. We all see constant images of too many sick patients and too few qualified doctors. I feel very guilty that I am not in an ICU caring for patients on ventilators. Over the last weeks, I really struggled to decide if I should go to New York or New Orleans to help, but reasoned that the impact on my family would be too great. I have offered to help in my local hospitals, but, for now, they don't need me.

So, instead of joining the fray, and leading the troops into battle, I am sequestered in safety. Does this make me feel powerless? Yes. Does it make me feel sad that I am not younger, more involved, and more useful? Yes. Does my lack of engagement make me feel lonely? Yes, it does. I have all these feelings. But has this led me to despair? No, it has not. Having the time to reflect has helped me better understand why not being at the center makes me unhappy. I am now trying to better step away from my own ego; I believe this effort is helping me gain new and more evolved perspectives. I can now better appreciate how amazing people are rising to lead us through this crisis. Entire communities have worked together to protect the public health. Medical professionals have been incredible. New and effective treatment options are imminent. I have never been more confident that we will emerge from this crisis better and stronger than ever. I will continue to try to contribute however I can to drive progress, but I have come to better accept that it is also OK to sit back, and just be a passenger.

Ken Waxman

Conclusion

Covid-19 pandemic has caused a great suffering and

turmoil in our society as well as major disruptions in health care delivery. The financial impact on hospitals and universities, biomedical research, and education will be felt for years to come. Despite the broad impact of the pandemic, as surgeons, we should focus on creating novel strategies to mitigate the impact of COVID-19 on our lives and our patients.

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