The Adverse Impact of Coronavirus Disease 2019 on Healthcare Providers: Time to Start Measuring

To the Editor

The coronavirus disease 2019 (COVID-19) global crisis has thrown life as we used to know it into disarray. Health care professionals (HCPs) are first-line response workers and therefore exposed to direct and indirect contact to patients and infectious materials. Concerns about biohazards in the health care environment, infection prevention and control, occupational safety, and need to revamp safeguard measures have been widespread.[1] Efforts at local, state, and national level have been devoted attempting to improve protection for medical professionals. Airborne transmission of COVID-19 viral particles, especially during aerosol-generating procedures (AGPs), needs to be addressed with greater detail. HCPs are at high risk of becoming victims of the same condition their patients are suffering from.[2] One of the main issues of discussion has been on personal protective equipment (PPE) specifically about availability and shortages. But it is worth asking, why do not we know more about effects of COVID-19 and health issues of HCPs during the crisis, why do not we have precise numbers and more definitive data? The last report about the safety and health of HCPs dates back to earlier stages of the pandemic. On April 2020, the CDC and World Health Organization reported that around 35,000 HCPs around the world (9200 in the United States) have become infected and there are 198 fatalities. This number is clearly an underestimation, a "Tip of the Iceberg," because testing is not yet widespread, mandatory, or universal.[3] Press reports from Italy, for example, point that at least 10.5% of their health care workforce became infected during their peak in the infection curve and they report at least 150 fatalities in that country alone.

But why does it seem that we stopped counting, why do not we have more precise data?[4] The HCP workforce is diverse; are they equally affected and is there any difference between gender, line of work, country, or region? On April 28, the International Labor Organization (ILO) celebrated the annual World Day for Safety and Health at Work with the aim to promote international attention to safety and health culture, to reduce work-related deaths and injuries. And we know infection control issues and prevention practices are not the only concern for HCPs during this pandemic, mental health and psychosocial issues are equally important and much harder to measure precisely. Added unmanaged stress and physical and emotional fatigue have major implications for overall health, job performance, and mental well-being. This was previously observed during SARS outbreak and more recently in the Wuhan area. Front-line HCPs, mostly women (76.7%), nurses (60.8) reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%), and mental distress (71.5%).[5,6] There are numerous reports of high levels of stress, fatigue, burnout, depression, and PTSD (recently even an unfortunate suicide of an ED physician in NYC). There are many positive and decent gestures of solidarity toward HCPs around the world, but there are also reports of physical and psychological violence toward members of the health care community. This has sent shockwaves throughout the world and has definitely been a source of additional concern and stress.

It is time we turn the light on HCPs and understand that we are vulnerable in many levels. We need to pay more attention and raise concerns not just about the pandemic but also the pathophysiology, treatment, and prevention of the infection. We need to "keep an eye on the ball" and aim more efforts to quantify and measure the impact of the crisis on HCPs. COVID-19 issues are more complex than just a simple occupational hazard and likely will linger even if the crisis subsides. Data from China suggest that added pressure for HCPs comes from resuming surgical activity in phase 2, with strong call for administrative plans and measures to minimize HCPs burnout. The State Council of China set up a nationwide psychological assistance counseling service via telephone and Internet, and similar resources have been made available in Europe.[12,13] There is clear opportunity to provide training and education for HCPs. We need new skills that will enable us to cope not just with current issues but also allow us to emerge and function well after this crisis has passed.[14] We need new skills to live in the present, learn from the past, and plan for the future. The same way military elite forces such as the British marines (who work in an environment where the risk of death is omnipresent) have appropriate equipment, education and training (on top from the obvious physical training) they receive also added cognitive training to prophylactically

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and actively treat "potentially traumatic events," using Trauma Risk Management (TRIM) training.[7] TRIM training teaches basic stress management skills to all marines and gives them tools to support other colleagues. Similarly, bespoke versions of such training (MedTRIM) and other front-line workers such as firefighters and police officers have been developed.

Julius Cesar wrote "nosce hostem," that translates to "know your enemy." We need to apply what we know about systems engineering concepts to identify areas and aspects of care where we have gaps that need to be addressed and patched. Peter Drucker is credited with the phrase "If you can't measure it, you can't improve it." HCPs are facing unprecedented challenges and dealing with new powerful threats; it is time to start measuring.

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