



Silver linings at the bench and bedside

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To the Editor

The ongoing COVID-19 pandemic has taken a tragic toll upon humanity, particularly among the most vulnerable populations of the world. At the time of writing this editorial, over 20 million infections have been documented and nearly 750,000 have died (<https://virusncov.com/>), with the total number of cases likely underestimated due to minimally symptomatic or asymptomatic patients. Yet, even dark moments such as these present opportunities to learn, improve, and prepare for what comes next. Silver linings for medical science are coming into view and the onus is on us to embrace them. We are seeing an unprecedented level of cooperation among scientists in academia, industry, and government. The courageous work of professionals in hospitals, on the streets, and in laboratories has drawn the enduring adulation of wide swaths of society and has highlighted our common goal of saving lives and bettering the human condition. Now is the time for our community to seize upon this opportunity to refocus and harness the power of science and medicine to do as much good as possible.

We have realized, during this time of crisis, saving lives requires heightened freedom to operate among physicians, nurses, and drug developers. Our national and local governments have wisely taken steps to reduce or minimize the burden of regulatory oversight, compliance, and legal liability during the COVID-19 crisis. Some states have suspended requirements for in-state licensing, allowing physicians from other states to practice. Relaxed

documentation requirements for routine processes in hospitals such as verbal orders and expansion of permissible activities for non-physician providers have yielded necessary workforce supplementation. Enabling doctors and nurses to spend more time with patients and less with computers or paperwork has saved lives during this crisis. Beyond regulatory relaxation being necessary and life-saving at this very moment, we should come to realize that in future crises and perhaps routinely, allowing medical and scientific work forces to act with sufficient flexibility makes our societies safer and healthier.

There is also an opportunity to learn from how pharmaceutical companies and scientists approach COVID-19 vaccine and drug development. We need to understand why our rapid need for accurate COVID-19 testing was not met quickly enough. Will expanded freedom to operate and strong incentives to rapidly innovate improve our future responsiveness and be routinely welcome? Clearly there is a delicate balance to be struck. We must remain vigilant for bad actors that may bring harm to patients and maintain our commitment to implementing systems to curb honest mistakes. Yet, what we have seen during this crisis is that excessive restrictions on medicine and science, in and of themselves, can limit progress. We may end up in a safer, better, and happier place if we continue to seek the optimal balance between freedom to innovate and implementation of necessary safeguards. Should we find a better balance, the result may be greater progress, more lifesaving discoveries, and betterment of the human condition.

Clearing away some of the legal landmines that significantly hinder the care of patients with life-threatening conditions has been another welcome intervention by many governmental bodies. It would be unconscionable to allow fear of litigation to prevent healthcare workers from trying to save lives during this crisis, while risking their own. Physicians, nurses, and other care providers are intervening without a playbook and sailing in uncharted waters. Real-time risk–benefit assessments have been essential and can be effective in the absence of consensus driven guidelines. These shifts and pivots are absolutely necessary now. We would

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also do well to let them linger. For these changes to endure, we must accept that all human endeavors involve risk, including patient care and drug discovery. We can accept slightly more risk, with extreme prudence, in exchange for a better and safer society. Let us embrace this opportunity to find a better balance in how we govern medicine and science.

This emergency also places a spotlight on how we prepare physicians to care for patients in routine settings and in the face of a healthcare crisis. Medical school curricula have appropriately come to place increasing emphasis on understanding and managing important social issues that can impact wellness and disease. Current events are teaching us that we must also ensure that medical students understand pandemics, the drug development process, gross anatomy, and enough basic science to adapt to unique or unusual emergent situations. Creating a system of medical education that teaches physicians the tools to save lives during a healthcare crisis, while also addressing the holistic needs of patients and ensuring equitable care is of paramount importance.

The SARS-CoV-2 will cause tremendous damage, take many lives, and cause us to mourn collectively. As we

recover and rise up again, let us begin the next fight now and not wait until the enemy is among us. The bold physicians, nurses, and scientists who are putting their lives on the line should be empowered and enabled to prevent death and suffering in the future. We are learning, once again, that scientists and healthcare providers do their best work when left to focus on their fundamental purposes—saving lives and making lives better. Physicians and scientists have been given increased freedom to operate during this crisis. How we respond during this pandemic will determine how many lives are lost as a result of SARS-CoV-2. The manner in which we behave in the aftermath of the COVID-19 pandemic will determine how ready we are to face future challenges.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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