

## How to Stand Up for Science and Fight Burnout

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As I write this during the first week of February, the Omicron variant of the SARS-CoV-2 virus is still kicking us, taxing hospital capacities, and causing patients with so-called non-urgent procedure needs to endure forced delays of care. Everyone seems to be wondering when this COVID-19 nightmare will end so that things can return to some semblance of “normal.” Many of our patients are registering their emotion of being “over it” by abandoning any pretense of trying to mask or social distance whether they are vaccinated or not. Such a cavalier approach is not open to us in our workplaces where we continue to deal with surly patients, avoidably crowded emergency departments and ED waiting rooms, and the ongoing need to continue wearing PPE.

The nightmare of the pandemic and citizens’ non-heedful responses are combining to cause unprecedented burnout among health care personnel. Burnout is a consequence of moral injury and we have all been getting overdosed on that! We know that our nation’s highly suboptimal immunization rate and many of its citizens’ resistance to scientific measures to blunt the pandemic have been prolonging the avoidable pain, and these factors are causing a significant amount of that moral injury. Those healthcare workers who can leave their moral injuries behind have been departing from healthcare as part of a broader societal trend of workers departing the workforce in what has been called “the great resignation.” According to a February 1, 2022 “COVID-19 Update” video, the American Medical Association’s Board of Trustees President,

Dr. Gerald Harmon, shared that an additional 20% of physicians and 40% of non-physician healthcare workers are contemplating leaving their careers within the next year. If that happens, we are all in deep trouble.

Most of us would agree that one of the things that could help kill the nightmare and blunt the moral injuries leading to burnout quickly would be to persuade more of our still-unvaccinated patients to finally get their jabs and become a vaccinated part of the solution. They also should resume masking but more on that in a bit. To persuade those not yet vaccinated to get their jabs requires us to convince them of the science of the matter and the illogic of their contrarian anti-science positions.

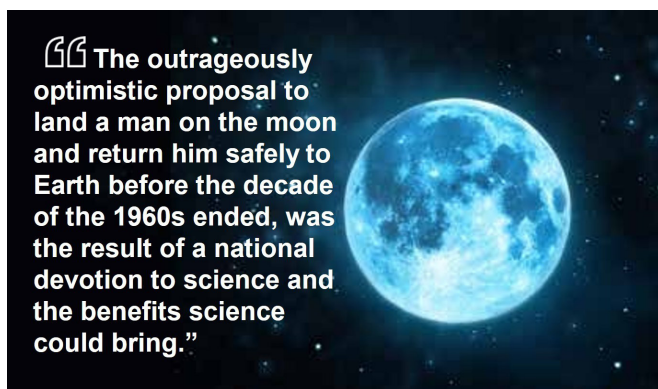
The thing about science is that an anti-science faction has NOT always been a large part of America’s citizens. In the America of my youth, science was revered. I was born in 1957 and grew up enthralled by the Mercury, Gemini, and Apollo programs as did many of my classmates, and indeed, many of our fellow Americans. The space programs that resulted in our fulfillment of President John Kennedy’s vision, the outrageously optimistic proposal to land a man on the moon and return him safely to Earth before the decade of the 1960s ended, was the result of a national devotion to science and the benefits science could bring.

The mobilization of science was the result of the kick in the pants America got in 1957 from the Soviet Union’s launch of the Sputnik satellite, followed by a national mission to leverage our society’s might in science, wealth, industrial capacity, and technology

such that we would win the “space race” and beat the Soviets to the moon. It was rare to find anyone who would publicly declare as a bad idea the set of choices required to emphasize science and enable the moon missions.

It is true that there were outliers, the kind of people who if they were alive today, would believe the baseless anti-science theories perpetrated by that great, nearly un-refereed “graffiti board” called the internet. But, those individuals were the minority and they didn’t have the ability to go online and quickly find numerous other like-minded people who were as misguided as they were, such that they could form an online community and come to believe that it was them who was normal and everyone else who was misguided.

As an example of what the some of the few who were overtly anti-science believed in the era of Apollo, one theory that gained traction in various parts of the country was the idea that fluoridation of drinking water, a step that helps dental health by decreasing dental caries, was actually a government plot to assist in gaining governmental control over our minds. This belief is about as sensible as the current and woefully misguided idea that the COVID-19 vaccine implants recipients with microchips, or the idea that more people have died from the COVID-19 vaccine than from the disease.



In other words, those who reject scientific thought have always been among us and we can’t change that. But the internet sure makes it easier for these people to find each other and create their own misguided communities, where it is them who come to believe that they are the normal ones.

Now, having stated the general problems of irrational beliefs being potentiated by the internet, the current general disrespect of science and scientific advice, the role of moral injury in “burnout,” the threat that a burnout-induced “great resignation” from health care careers which could accelerate and threaten the well-being of our nation and its people, and the expectation that most of us want things to “get better,” I will offer some ideas to counteract these forces.

Here are six ideas for engaging the engageable. You may have others. My ideas are constructs, based in stories. Humans are “hard-wired” to respond to stories and they respond much better to stories than to data. The fact that you have read this far into my story reinforces the validity of my premise. My stories are designed to engage those willing to engage with some ideas about science that they probably had not considered, toward trying to persuade them to change. Useful change can help fight moral injury!

My first construct is “**the fog of war,**” to explain how health care authorities have proffered changing recommendations for the public as to how to respond to the COVID-19 threat. The fact that our health care authorities’ recommendations have changed as our experience with the virus has evolved is not a sign of incompetence or weakness. It is a consequence of what can be expected to happen as knowledge is gained. We are all engaged in a war, an anti-microbial war against a foe that has killed more

than 3500 healthcare workers, among its nearly 900,000 American fatalities. Just as conventional military forces learn from experience which tactics worked and which failed in fighting an enemy, and just as the motivations of the enemy may not be apparent early in a conventional war, so it has been in our medical war against COVID. You remember how it was in March of 2020—we were all in a “learn as you go” mode. We adopted measures that worked and abandoned practices that didn’t. Over time, we have dispelled a lot of this “fog of war” as we have learned much about our viral opponent. But, we still have some “fog.” The new Omicron variant may, or may not, be deterred by current vaccines and newer monoclonal antibody and oral antiviral medications, for instance. Our patients need to give our health care leaders a break. They can’t disseminate reliable guidelines until they have gained the necessary knowledge to enable those recommendations.



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My second construct is **“systems work best when fully engaged.”** The everyday experience of any person includes exposure to multi-part systems

where the whole is greater than the sum of the parts. An example is seat belts/shoulder harnesses plus air bags in motor vehicles. They work best when used together. Those who don’t “buckle up” are more likely to die in crashes in which they are not employing all parts of a vehicle’s restraint system—sort of like those who won’t get vaccinated and/or won’t wear masks are more likely to be burdened or killed by COVID. Further, although there are those that argue against mask mandates because there is availability of a vaccine, no one of whom I am aware is advocating that we no longer need seat belts and shoulder harnesses because, after all, vehicles have air bags. It’s time to bring that logic regarding auto restraint systems into the public discussion of mask mandates. I get it that no one wants to have widespread business or school closures but it is the schools that won’t impose mask mandates that are more likely to be forced to return to virtual instruction, an outcome that few on either side of this debate wish to occur. The bottom line: masks and vaccines work best when enabled to work together!

My third construct is **“location does not impact effectiveness, and thus I can prove you actually do believe masks work!”** Despite widespread resistance on the part of the public and some politicians to mask mandates in public places, I have never heard advocacy for abandonment of mandatory masking in the operating theater or other similar locations in the medical care delivery system. The fact that no politician or science-detractor is advocating for optional masking in the operating room implies that they must believe masks help decrease disease transmission. So the argument against masks becomes not that they don’t work, but rather, that the detractors are just not used

to wearing masks in public to fight COVID, and/or they simply find masks inconvenient or disagreeable.

My fourth construct is **“your ‘liberty’ arguments are not persuasive.”** Those who view mandatory masking as heavy-handed thefts of their liberty nonetheless do not protest other societal expectations that they fulfill, in a manner that inherently requires non-assertion of a liberty. Examples are numerous, including but not limited to the facts that no one is suddenly arguing that clothes should be optional in public, that shoes cannot be required to enter a business, or that reasonable speed limits should be obeyed, especially in areas such as school zones.

My fifth construct is **“actually, warp speed isn’t speeding.”** President Trump was wise to set processes into motion that have rapidly resulted in the useful vaccines that only a minority of his supporters have been willing to receive. (Actually, the Pfizer-BioNTech vaccine was developed by the Germans outside of “Warp Speed”). However, the “warp” was only in the final step, the testing of the vaccine on willing subjects. The basic science upon which the vaccine was built includes tactics and ideas that have been known for up to two decades or more but it is unethical to deliberately infect study subjects with a potentially fatal illness. No IRB would approve such a trial so medical science had to wait until the onset of a pandemic to try out these new RNA vaccines. The vaccine was NOT rushed to development, it was only rushed to market.

My sixth and final construct is **“so, you’re now my patient. What changed?”** Rare is the anti-science, vaccine-renouncing, non-masking patient who will remain at home and die without at least seeing if perhaps the doctors and nurses at the hospital might be able to help them once they

become significantly burdened by COVID-19. It is logical to wonder why they would suddenly believe in us and the measures we have to offer after resoundingly rejecting scientific wisdom until the present moment.

**“There is great power in being a physician. Use it, and use it wisely.”**

The thing is most patients still respect their doctor, even if they don’t respect science or “medical experts.” They rightfully believe that we will do our best to help them and that we will therefore deploy all of the scientific measures that are indicated.

Thus, the time of the patient encounter with those “doubting Thomas” patient whom we meet is the time to persuade them, one person at a time, that perhaps they might be well served by abandoning their recent, counterproductive beliefs and implement some useful actions. After all, the SARS-CoV-2 virus doesn’t care what its victims believe but it is influenced by what we as medical care professionals can do to attempt to blunt its impacts.

The take away is that by politely confronting and refuting recalcitrant patients’ misguided beliefs and behaviors, we gain the chance to see with our own eyes and with our own experiences that we can sometimes change the minds and beliefs of some of these people. And in changing their beliefs and attitudes, we gain an antidote to yet another episode of moral injury and fight our own tendencies to burn out.

There is great power in being a physician. Use it, and use it wisely. When you have the chance to try to make a “convert,” one person at a time, and persuade them to “get religion” as regards vaccines

or masking to blunt the impact of COVID-19 disease, you get to use your inherent super-power and take the opportunity to at least try.

**ACKNOWLEDGMENT:**

MedJEM acknowledges AAEM & its “Common Sense” newsletter for their support.