

# COVID Pulls Back The Curtain on Societal Plight

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**“T**he most opportunistic biological weapon generally is what makes a pathogen also difficult to combat in the field. This includes easy dissemination, effective transmission, difficulty in detection and no vaccine or effective therapy. From a global perspective, if this is combined with an ineffective public health response, or a weak government, it becomes a catastrophe.”

I wrote these words in *Health Progress* in the November–December 2019 issue, mere months before the most devastating pandemic the world has seen in 100 years erupted and spread across the globe. It is highly probable that while the magazine was being physically printed, the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), the virus that causes COVID-19 had already arrived in the United States; we just didn’t know it at the time. As I reflect on the article I wrote, titled “Guns, Germs and Health Care,” I am struck by how much of what was contained in those pages became reality. I have never wanted to be so wrong about something in all my life.

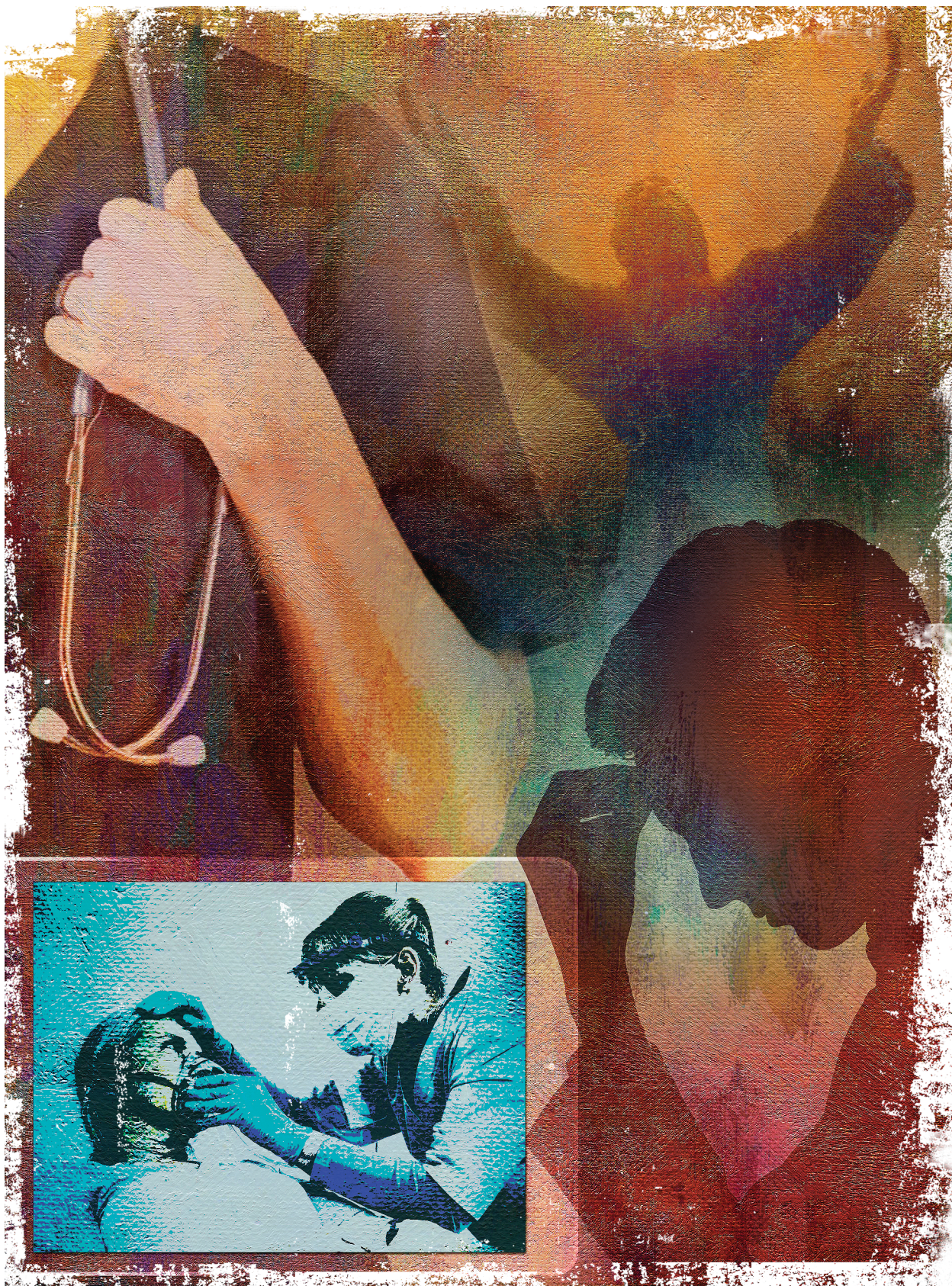
In this previous piece, I wrote about my experiences with violence, firearm injuries and infectious diseases throughout my career as a paramedic and emergency physician, the Chief Medical Officer at the U.S. Department of Homeland Security and as an Army officer deployed to war. Over the past year I added another title, COVID-19 Incident Commander for SSM Health and then of the St. Louis Metropolitan Pandemic Task Force.

Even though I had worked on the U.S. response

to pandemics while at the Department of Homeland Security, mostly concerned with highly pathogenic avian influenza, I never fully comprehended the breadth and depth of the disaster that was to come. To be honest, I am not sure anyone could. It’s sort of like preparing to go to war for the first time. Your mind has no context to fully comprehend the experiences, the environment, the nuance, the sights, sounds and smells, the frustration, confusion and emotion that comes with it. With the pandemic, we encountered something like what we call in the military the “fog, friction and noise” of warfare. I know in Catholic health care we try to avoid the language of warfare to describe everyday occurrences, but I ask readers to make an exception in this case, both because of the scale of the pandemic and because much of my prior experience fighting disease comes from my service in the military and in national security.

As I have reflected on this past year, the loss of life, the political and civil divisions in our society, the economic toll and the populations that were hit hardest by the pandemic, mostly the poor and vulnerable, it is difficult to recognize how life was







prior to 2020. The past year has, at a minimum, amplified those things which make societies and civilizations fragile.

I have chosen a couple of quotes from the original article to expand on through the lens of what occurred over the past year, and to offer some insight from parallel situations I have experienced since then. To begin, I'm returning to:

*"The most opportunistic biological weapon generally is what makes a pathogen also difficult to combat in the field. This includes easy dissemination, effective transmission, difficulty in detection and no vaccine or effective therapy. From a global perspective, if this is combined with an ineffective public health response, or a weak government, it becomes a catastrophe."*

As a threat, the SARS-CoV-2 virus had all the hallmarks of a highly effective biological weapon. It was easily disseminated, using the host's own respiratory system as an effective dispersal method. It made humans unwitting soldiers in its cause. It did not require anything to make it aerosolized, like what we had feared with highly milled anthrax while I was working at the Department of Homeland Security. The human lung machinery did this for it. This ability to travel in the air on tiny vapor bubbles created opportunity for the virus. As people gathered in enclosed spaces, it allowed the virus to create "mass effect" when either a highly contagious person or multiple people concentrated the virus in the air. This, coupled with the inherent viral capabilities and a completely unprotected host, made transmission easy, fulfilling the second requirement of an effective biological weapon. And of course, it was undetectable, especially early in the pandemic, when testing was limited or nonexistent. This allowed the virus to spread, initially undiscovered, throughout communities. It commandeered others to assist in its strategy by allowing persons to become infected and spread the disease while not even realizing their respiratory system had been co-opted. A clever feign by the virus.

In addition, there was very little effective treatment other than oxygen and general supportive care for those who became significantly ill, and until December of last year, no vaccine.

Having filled the requirements as an optimal biological weapon, it still required an ineffective

public health response or a weak government to become a catastrophe. Despite the best efforts of infectious disease and public health experts, the fractured, political response to the pandemic was ineffective on multiple levels, leading to tremendous loss of life and untold suffering.

*"However scary a deliberate biological attack seems, nature is much more prolific at developing and spreading serious infectious disasters than any nefarious state actor."*

A virus is one of the simplest things in the world; a strand of genetic material, in this case ribonucleic acid (RNA) surrounded by a protective protein coat, invisible to the naked eye and basic microscopy. There is still debate on whether a virus is a form of life. And yet, this strip of nucleic acids, properly organized, caused more death, destruction and economic damage than a world war. This virus resembled other "threats" to our national security, our economic vitality and our public's health, only by means that were different from traditional actors, such as terrorist organizations. Had COVID-19 been a terrorist organization or a government that killed hundreds of thousands

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of Americans, perhaps we would have seen a different response, something closer in scale to what the U.S. did after the attacks of 9/11, which directly resulted in two separate wars, costing trillions of dollars. Comparing what we have been through over the past year bears a striking resemblance to what I witnessed during war, however. The lack of appreciation for the lethality of the threat and the lack of recognizing a common enemy led to unneeded death and loss of livelihoods.

One of the things that contributed to a poor response strategy was a failure to understand the fundamental strategy of the virus. Its sole strategy is quite simple: to replicate. A virus cannot reproduce on its own. It needs a host to make more of its kind, to survive, which then becomes

the mission of its replicants. However, the virus, unlike human enemies, had no rational thought process, no ideology and, if war is political objectives by other means, it had no political objectives. This virus didn't care about the legalities of mask wearing, the right number of people who can eat in a restaurant, or Emergency Use Authorizations, conservative or liberal, Black or white. It had a remarkable ability to manipulate politicians and others and drive a disinformation campaign without a single interview or organized media strategy. It leveraged existing divisions in the population and exploited them. It convinced leaders that it wasn't such a bad thing, that it was like the flu or a bad cold; that it would be gone quickly, like an uninvited guest, and at its worst, that it didn't even exist. It is therefore remarkable that one of the simplest forms in all of life, in all the world, with such a simple strategy, was able to bring such disruption to the highest life form. Combined with the disjointed health care system that is uniquely American, and the dismal neglect of public health over the decades, it created the perfect battlefield conditions on which to attack. And attack it did.

In my article for *Health Progress* before the pandemic, I also wrote:

*"In many ways, however, infectious diseases are similar to gun violence. They affect the poor and vulnerable disproportionately and can span from small intense episodes, such as a case of meningitis or sepsis, to full-blown disasters, such as the H1N1 pandemic or recent Ebola virus outbreaks."*

Just as in warfare, the enemy will probe and exploit the weaknesses in defense. Similarly, those most at risk of suffering in war are the same populations that suffer disproportionately during the pandemic, mainly the poor and vulnerable. In epidemiology, the differences in disease outcomes are driven by risk. These can be described as the risk of becoming infected and once infected, the risk of a poor outcome. Risk, in life and in a pandemic, is not equally distributed across the population. Risk of contracting and having a poor outcome from COVID differs at the

individual level and at a societal level – a result of conditions placed upon populations from prolonged neglect and discrimination. For instance, a well person, living alone or with just the immediate members of the family, with access to broadband internet, the ability to work from home and, therefore, with a steady income to pay for living expenses, has a much lower risk profile for multiple poor outcomes from the pandemic than someone born into poverty, who lives in dense, multigenerational housing, who must travel long distances on public transportation for a service

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job that requires them to interact with multiple different people over the course of their day so they can make enough money to survive. From this, those who are least capable of protecting themselves are the ones who are most at risk and often bear the brunt of disease.

Although COVID-19 has dominated our lives this past year, it certainly was not the only issue impacting society. The murder of George Floyd in Minneapolis, Minnesota, and the record-breaking year of homicides from firearm violence brought the country's plights into full view. And so, it seemed rather prophetic that my previous article described the two dominating public health narratives over the past 16 months.

In my previous article, I wrote of what we call in the military, the "boom" — the use of improvised explosive devices (IEDs). If you think of the efforts to prevent negative outcomes along a continuum, then "left of boom" were things that prevented an explosion, such as deterrence and detection, and "right of boom" were approaches after the fact, such as the response, tracking the perpetrator, care for those who had been harmed



and more. In that article I wrote;

*“As Catholic health care providers, we must be both prepared to care for the victims and patients, but, just as important, our ministries also call us to work far left of the “boom” by mitigating negative influences and determinants for those our mission calls us to serve. It is through this approach that we can reduce the effects of guns and germs on societal success.”*

I am often asked, “What can we do to be better prepared for the next pandemic?” My answer is what you might expect: better disease surveillance, better vaccine manufacturing, etc. However, asking how to be better prepared for the next pandemic is the wrong question. The questions are how do we prevent the next disease pandemic, and how do we prevent more gun violence now. To this, we must work toward a more resilient community predicated on social justice. President Barack Obama once said, “When disaster strikes, it tears the curtain away from the festering prob-

lems that we have beneath them.” The inequities, the “festering problems” that drove higher risk, morbidity and mortality for our communities, are not simply health problems; they are the issues that have great impacts on health, the “social determinants.” The pandemic and its aftereffects are not just the responsibility of those working in health care or public health: They belong to all of us.

If we wish to prevent or minimize the probability of a disaster, or the everyday infectious disease or gun violence, or its second- and third-order effects, it requires unity of effort from the whole of society to work for a more equitable and resilient society. Working to eliminate poverty and discrimination and improve lives reduces the risk of disease for the whole—in pandemics, in gun violence and otherwise.

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