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Editorial

Radiology, COVID-19, and the next pandemic



ARTICLE INFO

Keywords:

COVID-19

Delta variant

Pandemic

Vaccine hesitancy

Vaccine inequity

One can read in several venues of the litany of missteps that led to the United States of America (USA) becoming one of the early epicenters of the corona virus disease 2019 (COVID-19) pandemic beginning in spring 2020 [1, 2]. Our purpose is not to focus on these tragedies of misunderstanding, mismanagement, inaction, and implementation, but to encourage the medical community to act now to prevent future mistakes. As radiologists, our earliest and often primary interface with COVID-19 seemed to be in reading multiple chest X-rays and computed tomography (CT) examinations of the lungs of patients suspected of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection [3, 4]. While the demand for non-COVID-related CT examinations has essentially returned to normal and the pandemic is receding in the USA after 17 months, it is worth considering how radiologists can further contribute to addressing what continues to be a global health crisis. The Delta variant (originally identified in India and now prevalent globally) poses a considerable risk for those unvaccinated in the USA and throughout the world and long-haul COVID presents myriad health problems we are only beginning to study and understand. Radiologists play an important role in diagnosis and management of patients affected by COVID-19 [5, 6] and perhaps can have greater input in communicating sound, healthy behavioral practices to the public regarding the current pandemic and likely future ones. We herein briefly consider the potential role radiologists can play in this continuing health crisis and those that may follow.

Some of what we have learned . . .

As the pandemic unfolded, it took some time to learn that while generally less vulnerable, children are not immune to the SARS-CoV-2 pathogen and, in fact, are susceptible to the related multisystem inflammatory syndrome in children as well [7]. We do not yet know if survivors become immune. But we do know that appropriately enacted public health measures work to stem the tides of epidemics and that the rapid vaccine movement in the USA paid dividends with declining infection and death rates (until the Delta variant sparked increases among the unvaccinated, primarily, beginning in July 2021). In fact, vaccines have

become available in unprecedented timelines and have proven quite effective, even more than expected [8].

Global vaccine inequity, however, looms as a major obstacle to inoculating enough of the world's population to render COVID-19 even a minor threat on the world stage. It appears that the virus will be with us for the foreseeable future. Continual mutations may very well outpace the effectiveness of vaccines at some point, as well. Further, experts at the World Health Organization (WHO) and several epidemiologists predict more virulent, and more frequent, pandemics in the near future [9]. Even now, WHO is recommending that fully vaccinated people continue, or resume, wearing masks due to the spread of the highly transmissible COVID-19 Delta variant [10].

In the USA, vaccine hesitancy, which is hardly new, poses an ever-present danger so much so that it is identified among major global public health threats according to WHO, and was listed within its top 10 health threats in 2019 even before COVID-19 emerged [11–13]. While vaccine hesitancy is not a recent phenomenon among parts of the population and health care workers are, of course, part of the population, vaccine hesitancy among some health care workers may seem surprising [14]. Interacting with such colleagues may be an important inflection point for radiologists and other health care workers to attempt to improve vaccination rates. This, of course, means interacting not only with other physicians but with radiologic technologists, nurses, and other ancillary support staff such as in registration and patient transportation.

And what can we do: communicating is the key

As healthcare workers, we witness and experience aspects of life that can yield well-informed opinions on important issues, such as the roles of the pharmaceutical and insurance industries in public health, the implications of antibiotic resistance, the deleterious impact of racial disparities on public health, or the need for preparedness for global pandemics. Our roles and responsibilities need not be limited to patient care. Indeed, actions that we take to prevent people from becoming patients in the first place can be vital in contributing to public health.

Further, our understanding of science and that nature abides by such laws—not the laws of human beings—leads us to a more accurate, and less sanguine, picture of how the USA has and is responding to the deadliest pandemic since the 1918 influenza as compared to the media, which may reflect the population's pandemic fatigue, desire for vacation travel, and need to return to some semblance of “normalcy.” Re-opening economies was and is an economic decision unrelated to well-established public health actions recommended to attenuate the effects of the pandemic. An all-encompassing economic aid package, which was among the early proposals, might have

precluded the devastating effects that millions of Americans are facing now due to unemployment, reduced unemployment compensation, reluctant decisions to shutter businesses, ongoing furloughs, and the apparent end of the eviction moratorium. Of course, any new aid packages cannot reverse what has already occurred or bring back those who have been lost.

The delicate balance between safely reopening the economy and preventing future infection surges is challenging to predict in this quickly evolving situation. Countries around the world have adopted different strategies to make the impossible choice between saving lives and saving the economy. Even with 20/20 hindsight, we may never know which strategy is best, given the many confounders that muddle the situation.

To mitigate our current public health crisis, physicians must do whatever is possible to limit the transmission of the disease. To achieve this, progress in public health messaging is continually necessary. Where you have an opportunity as a medical doctor—on the airwaves, in journals, on Twitter—use it. Dr. Leana Wen, a former health commissioner of the City of Baltimore, Maryland, former president of Planned Parenthood, visiting professor at the George Washington University Milken School of Public Health, and author, has tirelessly debunked myths about COVID-19 and disseminated the most up-to-date information and soundest recommendations to her radio and TV audiences as well as her Twitter followers. Tom Inglesby, MD, Director of the Center for Health Security of the Johns Hopkins Bloomberg School of Public Health, has frequently been consulted on the public airwaves during the last 17 months to clarify misconceptions about the pandemic [15, 16]. And, of course, Dr. Anthony Fauci, longtime director of the National Institute of Allergy and Infectious Diseases, has navigated stormy seas in presenting evidence-based science and experience-based caution to the American public. We applaud these folks who took the risk of being second-guessed even when armed with the most current information and want more such efforts.

Politicizing a public health crisis is harmful. Doctors around the world have bemoaned, for instance, that only in the USA is mask wearing an apparent political act [17]. It is incumbent upon the medical establishment to unequivocally disabuse the public of any and all misrepresentations and communicate what people must know to keep themselves healthy and avoid acting as vectors of infection.

Our training does not place us naturally at the interface of medicine and public health. But our visibility opens many doors and provides us with the knowledge to understand the work of our colleagues in epidemiology and infectious diseases and to support their mission. Radiologists can certainly help in this context with whatever media and public access we may have. More likely, though, radiologists can support our colleagues in epidemiology and infectious diseases in promulgating best public health practices. We can write letters to newspapers, online blogs and journals, as well as politicians with public health messaging in echoing our comrades in these fields. Expanding public health messaging to target communities especially skeptical of vaccination is crucial now, as black and brown communities have been notably susceptible to COVID-19.

Radiologists can also promote the recommended public health protocols in communications with patients, their families, and even vaccine-averse co-workers. Calmly trying to debunk reasons for misgivings about vaccines or wearing masks can pay dividends not only for the reluctant individuals we may encounter but for their friends, families, and others with whom they will engage.

As strategies for navigating this pandemic have evolved, and even as we prepare for future such outbreaks, we must rely on science and evidence. But we must effectively communicate our evidence-based findings to a public sometimes uncertain as to where to turn. To this end, engaging behavioral health specialists in the crafting and drafting of public messages may also serve in helping to stem the tides of viral waves. Expanding conversations with patients to include

COVID-19-related messaging is vital as is communicating what we understand as the prevailing evidence on limiting the spread of the disease, disseminating vaccines, improving treatments, and blunting the effects of the Delta variant. To turn the corner of the pandemic, we may need to be ready to address aspects of the pandemic where we least expect it in order to help our colleagues improve public compliance with best practices.

Conclusion

Whether it's hurricanes in the South or wildfires in the West, or climate change-mediated heatwaves in the Northwest, the world has seen “once-in-a-hundred” or “once-in-a-thousand-year” weather events numerous times in the last decade and up to the present moment. A climate change-fueled storm would clearly be devastating to a pandemic-ravaged city or region also beset by economic hardship, resource scarcity, mismanagement, as well as the civil unrest we have seen in many areas of the USA this past year in response to police killings of people of color and backlashes to the protests. As we face a cascade of overlapping crises, we find public health squarely at the nexus. It will take the best of humanity to help guide us through various intersecting calamities and challenges. Now more than ever, we need the latest science, truth, honesty, and integrity to drown out the discordant din of mis- and disinformation. Health care workers, including radiologists, radiology nurses, and radiology technicians, are positioned to assist our colleagues in communicating life-saving information to the public.

Author contributions

All authors attest that they meet the current International Committee of Medical Journal Editors (ICMJE) criteria for Authorship. All authors contributed equally to the writing of this manuscript

Human rights

The authors declare that the work described has been carried out in accordance with the Declaration of Helsinki of the World Medical Association revised in 2013 for experiments involving humans.

Informed consent and patient details

The authors declare that this report does not contain any personal information that could lead to the identification of the patients.

Declaration of competing interests

The authors declare that they have no competing interest.

Funding

This work did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

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