

EDITORIAL

Reflections on the Discipline and Profession of Disaster Medicine and Public Health Preparedness

Italo Subbarao, DO, MBA; Aram Dobalian, PhD, MPH, JD; James J. James, MD, DrPH, MHA

For most of us, the tragic memories and burning embers of September 11, 2001, flicker in our minds even 10 years later. In that time, our nation has faced numerous domestic and international crises, both human made and natural, including SARS, Hurricane Katrina, the H1N1 pandemic, the Haitian earthquake, and the ongoing radiation emergency in Fukushima, Japan, but none of these had the singular effect of September 11.

Natural disasters, although devastating and with far-reaching implications, are readily accepted as a force of nature by societies and nations. Similarly, emerging infections and pandemics are acknowledged by the scientific community as part of the natural ecology and evolution of life. Even human-made accidents such as a nuclear meltdown, despite being equally devastating, are painfully accepted because of the frailty of human error. The terrorist attacks of September 11 and the subsequent anthrax attacks were uniquely different because of the recognition that these almost incomprehensible attacks were intentional. September 11th and the anthrax attacks awakened our nation to the dawn of global terrorism and its senseless, wanton neglect for human life.

September 11th had staggering political, sociological, economical, medical, and public health repercussions. Specific to medicine and public health, September 11th is widely acknowledged as the catalyst for forging the discipline and profession of disaster medicine and public health preparedness. This noble pursuit is intended to better prepare our world, which will continue to be afflicted by disasters and the incomprehensible plague of terrorism. This issue of *Disaster Medicine and Public Health Preparedness*, sponsored by the Department of Veterans Affairs, attempts to honor the 10-year anniversary of the terrorist attacks by presenting research that improves our evidence base on the lingering and long-term effects of this disaster and other devastating disasters on the first responder community and on those individuals in the highest risk groups exposed to the events, including a population that is often overlooked: military veterans. The authors contributing to this issue consider how far we have come as a discipline and profession, as both a primary and secondary occupation that is well acknowledged and respected by other fields of medicine and public health.

Our lead study by Soo et al showcases the continuing mental health burden facing firefighters who were engaged in the rescue and recovery responses to the attacks on the World Trade

Center (WTC). This longitudinal study of 11 000 firefighters followed for 9 years after the attacks reveals a prevalence of probable posttraumatic stress disorder (PTSD) of 7.4% in the group of firefighters who were associated with early arrival on the scene. Delayed onset of probable PTSD was associated with early arrival to the WTC, a reported increase in aerodigestive symptoms, and a reported increase in alcohol intake since 9/11. These findings continue to demonstrate the long-term impact and burden of mental health illness that this event had on this high-risk community.

In an effort to better elucidate qualifying exposure with appropriate psychiatric clinical diagnosis, North et al examined 379 surviving employees who were recruited from 8 affected organizations located within geographic proximity of the WTC. The evaluations took place 3 years after the terror attacks, and respondents were reevaluated at 6 years for PTSD. This WTC study was the largest to date to have used full diagnostic assessment methods in an effort to gain a more appropriate estimate of the potential mental and behavioral health resources necessary to support those communities exposed to a similar event. Nucifora et al provide a supporting commentary on the value of these studies.

This issue also includes a Special Focus article by Ekenge and Friedman-Jiménez that highlights the continued burden of chronic respiratory illness in workers who responded to the WTC attacks and illuminates the challenges and limitations of our present knowledge. The issue also features complementary articles that provide greater insight into the occupational and workforce hazards placed on first responders in a disaster. Studies include those on Hurricane Katrina first responders and the effects of the storm on veterans (Osofsky et al and Teten Tharp et al, respectively), an examination of the impact of the 2009–2010 H1N1 influenza pandemic on sick leave use in the Veterans Health Administration (Schult et al), and an insightful essay by Hodge et al that promotes the need to study and test legal statutes to better improve community preparedness.

The issue is supported by a commentary by Burkle, who provides a stark reminder about the limits of our capacity and resilience in recent events. Dobalian and colleagues comment on the effects that September 11th and subsequent disasters had on one federal agency's—the Department of Veterans Affairs—role in our nation's preparedness. Former senators Bob Graham

and Jim Talent provide provocative and timely insights on the ongoing threats posed by bioterrorism.

Since September 11, 2001, we have been continuously challenged, not by the depth or evolution of the scientific discipline, but rather by the need to standardize and codify the profession of disaster medicine and public health preparedness. Our response is to ask the following questions: What competencies and standards exist for all health professionals to respond to a disaster or public health emergency beyond their willingness to respond? What body or bodies certify and recertify that health professionals are able to respond both domestically and internationally? What body or bodies certify disaster response teams or nongovernmental organizations? What organization or organizations exist that are solely dedicated to the pursuit of the scientific discipline by providing annual and ongoing grant funding, scientific forums, and fellowships and training outside the federal government? What organization or organizations solely advocate for the needs of disaster medical and public health professionals? What organization or organizations exist that work toward quality assurance and performance improvement for disaster response? What organization or organizations exist that ensure that evidence-based interventions are adopted and adapted throughout our communities?

Certainly since September 11th, the federal government has taken the primary lead, as it has provided hundreds of millions of dollars in grant funding to support hospital systems, emergency medical services, public health, academia, and general first responder funding and education. Federal legislation has been passed, including the Pandemic and All-Hazards Preparedness Act, Homeland Security Presidential Directive-21, and most recently Presidential Policy Directive-8; however, legislation is only as good as the funding behind it and at this hour our government is constrained significantly by the economic downturn.

Measure these advances against the findings from *The World at Risk—The Report of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism* in 2008, which

concluded unless the global community acts decisively and with great urgency, it is likely that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013, and against the fact that the frequency and magnitude of natural disasters are increasing because of various factors. It is obvious that we in the disaster medical and public health responder community cannot afford to take a step backward. In fact, we must persevere through these difficult times, particularly in our pursuit of the profession, to better protect our communities, which are at ever-greater risk.

Government cannot accomplish the goals we have set in isolation. Indeed, per the National Infrastructure Protection Plan, 80% of disaster-response assets exist in the private sector. Doesn't the private sector have an obligation to share even more significantly in this pursuit? Doesn't the private sector have an obligation to the communities it serves and is in turn supported by? We call on the private sector to embrace its leadership opportunities in disaster response and to catalyze the profession of disaster medicine in the next decade.

It is our belief that we have made significant strides in the scientific discipline of disaster medicine and public health preparedness in the 10 years since September 11th, but our concern is that the profession and leadership in the private sector has not matured nearly as quickly. It is our hope and recommendation that the private sector fully embraces the opportunity and role to contribute effectively to the discipline of disaster medicine and public health preparedness. Even more important, the private sector should provide leadership in the pursuit of the profession, with requisite competencies, standards, and certifications, governed and monitored by an august organization(s) solely dedicated to the pursuit of the betterment of disaster medicine and public health preparedness. We remain confident that when the issue of the discipline and profession is revisited in 10 years, we will have witnessed an evolved and matured discipline and a highly respected profession, forged from private–public partnerships, that has ultimately contributed to resilient communities and mitigated lives lost from disaster.