



# The Limits to Our Capacity: The Realities of Community Engagement, Resiliency & Recovery in 21<sup>st</sup> Century Crises

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When asked, I openly welcomed the invitation to discuss resiliency as it relates to post-disaster and conflict community building. The definition rule that would measure its impact on individuals, communities and society has been labeled everything from a metaphor to a theory

<sup>1</sup> and some authors, while they include acts of nature, such as hurricanes, floods, and earthquakes in their studies of resiliency exclude mass violence such as wars and terrorism, epidemics and pandemics.

First my biases: I am a clinician and pride myself on speaking from my experienced knowledge-base. I practice international health in war, conflict, and human crises (all of which are major public health emergencies) and played the diplomatic scene for a time, so I have witnessed tests of resiliency at every level. I am also an academician and scientist concerned that we all get the opportunity to read from the same script and understand its content. When it comes to vulnerability and resiliency, its apparent reciprocal, I recognize that not all that might be disclosed to society is being disclosed, especially the best available science and best practices of these threats that impact our well being and that of global health. Governance, and the lack of it, is a more compelling element in determining what is disclosed to the public and what is not.

American Medical Association program that deliberates and debates on a daily basis to better communicate, educate and train our citizenry.

defined by the need for external assistance. The Center for Research on the Definition of Disasters defines a disaster as a "situation (incident) or event which exceeds local capacity, necessitating a request to a national or international level for assistance."

<sup>2</sup> Disasters are further identified as natural disasters, human systems failures, and conflict-based disasters.<sup>3</sup> Interestingly, the large majority of daily casualty events

common to every society

protecting society from the potential ills of the world remains an obligation of their profession or elected office. It is fair to question whether these cultural habits and expectations have actually impeded the development of functional resiliency at many levels and done more harm than good.

Disasters have the uncanny ability to immediately reveal and define the status of public health protections and expose its vulnerabilities.<sup>7</sup> I say 'expose' because no one factor in society has had more success in toppling political regimes and revealing government's hidden secrets and deficiencies than major natural disasters and other preventable crises. We must answer such questions like why, during Hurricane Katrina, did nearby Mississippi which took a harder hit than New Orleans, recover quicker, more smoothly, and without fanfare.<sup>8</sup> We still ignore the fact that the hurricane, whilst a natural event, was clearly a preventable human-made disaster produced by a previously known and well documented failure of the walls (levees) that society assumed would protect them. Worse, to date, no one seems to admit that the city of New Orleans is in the wrong place. Skill and competence of a government, or lack thereof, can have profound effects on vulnerability and whatever resilience can be mustered to cope at the final hour, a process called 'managed resiliency.'<sup>9</sup> But there is a limit to that capacity. By using the background of what we know and don't know about modern day disaster experiences, we must attempt to answer questions such as:

- How can we respond to disasters and other human crises with dignity and act in accordance with the lived experience of others;
- In community participation and governance, who is listening; and,
- What technologies and community engagements can benefit communities in a sustainable way?

To help answer these questions, and others, one must drill down deeper in understanding the nuances of crises that impact how vulnerability and resiliency plays itself out.

### **Infectious Disease Disasters**

We've learned a great deal about human resiliency through infectious disease epidemics and pandemics. The core principles of community management has not differed from the 1950s and 60s when unvaccinated epidemics of measles, polio, German measles, mumps, and ou

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We don't have much information on the SARS in developing countries other than dense populations and close living allowed for rapid transmission of the virus. In the developed world, Ontario Province, and specifically the city of Toronto, experienced the brunt of the SARS outbreak in North America. Resiliency at every level was tested and retested. In a pandemic everyone in a community either has the illness or is susceptible to getting it. Immediate resources must be robust in managing the illness as well as informing and protecting the public who remain at risk. Every decision that is made, medical and otherwise, must first ensure that it will not lead to the unnecessary transmission of the virus. Early in the outbreak, the large majority of people rushing to the emergency departments in the first 10-14 days of the outbreak were, although not exposed, those fearful that they had the illness. Total numbers were never counted but authorities reported that the health system was "inundated"<sup>15</sup> and included emergency medical personnel and others who developed multiple unex2( t)villneeda 009 ler p10(tiaj).

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guidance. The study was eventually published and widely reviewed in the popular press; it did receive some letters of concern from the public but clearly revealed that the community was

“unanticipated events, correctly anticipated events but failed responses, and wrongly anticipated events.”<sup>9</sup> In their failure to disclose, the best scientific and technological knowledge did not get used or widely disseminated. New engineering designs were written for improved protective structures that took into account effects of storm surge, land subsidence (out of sight shrinkage and settling of the original height of land brought about by accelerated extraction of groundwater), and the rising sea levels measured at that time sat on the shelf. Unwisely, these estimates were still being used 19 years later where sea levels had risen and land had lowered much more (10+ feet) than expected. Worse, the widely used FEMA risk assessment maps of the 100 year floodplain never included this new data.<sup>9</sup>

Partnerships essential to community based resilience facing unanticipated or unaddressed needs, usually “emerge from households, friends, family, neighborhoods, non-governmental and voluntary organizations, businesses, and industry.” These were repeatedly ignored. These so-called “shadow responders” were “refused or poorly used by government officials” even though they, when the disaster struck, “provided most of the initial evacuation capacity, sheltering, feeding, health care and rebuilding much of the search and rescue, cleanup, and post-Katrina funding.”<sup>9</sup> Arguably, the political and governance system in New Orleans was embarrassingly inept. In neighboring Mississippi good governance, effective community level partnerships and preparedness defined the differences in how resiliency and recovery was experienced.

A post-disaster study one year later confirmed that New Orleans had experienced a 47% increase in deaths over the prehurricane baseline. It is important to mention that a “non-traditional” community source, the Times-Picayune Newspaper, was alerted by their readers of an inordinate number of published obituaries indicating an excess number of deaths were occurring. The antiquated and hurricane-disabled Department of Public Health information system in which disease and death surveillance would normally be detected was no longer functioning.<sup>25</sup> This emphasizes the critical role that citizen awareness can play, in this case the

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Much of the language of resiliency and adaptation to crises arose out of climate change literature. The combined geophysical and social vulnerability in New Orleans was built over decades from multiple causes, including questions over whether the frequency of more intense hurricanes would be enhanced by climate warming. New Orleans did not utilize the growing body of scientific and technological knowledge on climate change nor was this information factored into critical engineering designs.<sup>9</sup>

Witnessing extremes awaken anxiety and question ones capacity for sustaining resiliency in similar circumstances. You cannot talk about the global impact of disasters without addressing the dilemma that is China. It is an outlier in so many ways. What happens in China does *not* stay in China...the manner in which it manages and mismanages environmental crises has an impact on us all. A few months ago I spoke at a climate change conference in Chengdu the capital of Sichuan Province in Western China and home to a massive agricultural and industrial plain that butts up against the Tibetan Plateau. The southern edge of the Plateau captures all the coal pollution from India, Bangladesh, and other countries that flows north from their boundaries then creeps east where it is concentrated with the local toxic industrial pollutants of China and dumped onto the Sichuan Plain. Our Chinese hosts, openly shamed, admitted that little would be done .00(o)-2(ic)4(u)-4(r)10(t)-4aila theise9(iv)3(e)-1r(e)-1(p.00(o)-2(lu)6(t)-4(io)-2(n)6( )TJ0.005 Tc -0.001 T

claim 5-7% of global freshwater. Water reserves are depleting at an “alarming rate;” but “the problem here is in orders of magnitude greater than anywhere else.” Ninety percent of groundwater is polluted, 60% seriously and in 2/3<sup>rd</sup>s of China’s 600 cities water is scarce.<sup>30</sup> Raw sewage and pollution from agricultural runoff into the South and East China Seas is so severe that it has changed the ecology of the normally protective organisms inherent to water allowing giant beds of thick green algae to cover 85% of coastal waterways.<sup>31</sup>

Present food security strategies are unsustainable. Yet, with no lack of transparency the governmental response is: “I’m afraid you’ll have to live with it, it is a disease of civilization...there is no cure.”<sup>32</sup> Other countries, seemingly intimidated by China’s economic

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are hostilities that range from guerrilla warfare, prolonged political violence, terrorism, and wars of national liberation. Whereas the incidence of conventional warfare is the lowest in three decades, the number of people living in some level of post-conflict intensity, including intimidation, easy availability of weapons and economic, social, and public health stagnation is unprecedented.<sup>38</sup> In all these situations the direct battlefield deaths of war decline as do outside political and humanitarian intervention and interests of donors. Yet the indirect mortality and morbidities continue to increase from lack of access and availability of healthcare and other essential services and may not return to the pre-war baseline for more than a decade. Terror still exists but is now called criminality or banditry. The immediate post-conflict phase which we refer to as the transition phase leading to development is the most dangerous especially for populations such as women, children and those with psychosocial and behavioral risk.<sup>26, 39, 40</sup>

In WWII 10% of the casualties were civilians. This increased to 70% in Viet Nam and 90% in Iraq. In the post-conflict phase many flee their surroundings most seeking security and work in urban settings, or to refugee camps of neighboring countries. Camps or “settlements” within Nairobi Kenya contain refugees from 8 different post-conflict African countries.<sup>41</sup> In reality, the term “post-conflict” is somewhat of a myth. The differences between populations at war and during the post-conflict phase gets blurred.

Unfortunately 47% of countries return to conflict within a decade, with a rate that is 60% in Africa. It must be remembered that the post-conflict infrastructure and system is usually 10% of what it was before the war. Predictors of a return to war include stagnation of economic recovery and worsening of the infant mortality rate.<sup>38</sup>

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*unsustainable*. Today, most of the world's largest megacities with populations greater than 10 million are experiencing rapid urbanization. But it is the density of the population that is the most sensitive indicator of an actual or pending human crisis. Mumbai, India has over 30,000 people per square kilometer and in some areas of the city there are over 1 million people per square kilometer.<sup>26</sup> Port au Prince (PaP), Haiti is probably a better example of the perils of dense populations. PaP at the time of the 2010 earthquake had a population of about 3.5 million but in 2 of 5 populations zones the most densely populated lived in disaster prone areas on the sides of hills and were killed outright.

In megacities new populations build where they shouldn't, in flood plains, on fragile beaches, in



resiliency as essential to community recovery. Despite efforts to redefine the way we live, the sense of community is universal and essential to the human species.

It has been found that disasters associated with psychological impairment are those with at least two of the following:<sup>48</sup>

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