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The Virus That Tells Us Who We Are

BY RICHARD COOPER

The new coronavirus presents a test of public health and other essential services. Right now the United States is failing that test.

Virtually every country in the world has been forced to take a difficult standardized exam over the past two months. Although the exam question—what would happen if you faced the emergence of pandemic from a new virus?—was not new, and in fact experts had assumed it would be a coronavirus, every virus has unique biology, so this exam was also a pop quiz. At the risk of overusing the metaphor, China took the exam first, and was struck by a fit of anxiety, tried to cheat by hiding from reality, and bombed the first section. But they staged a recovery at warp speed and by the accounts of expert observers have accomplished something of a modern miracle. How? By taking necessary dramatic action to control the activity and daily lives of tens of millions of people, building huge hospitals in two days, setting up diagnostic assays that deliver results in four hours, shifting an army of medical care workers to affected regions, and rapidly acquiring an understanding of the disease—all the key elements of containment and treatment—and so it looks now like China has stopped the epidemic in its tracks.

Although the grading is not yet complete, China seems to have earned an A for the exam's first round. Of course there were enormous social and economic costs, and severe constraints on individual freedom. Averting a public health disaster is costly. But not averting it is even more

costly. And as we are seeing, some other nations seem to be doing well on the exam without China's extreme levels of social control.

South Korea went next, and demonstrated thoroughly workmanlike success. Italy and Iran followed, and at the moment are on the verge of flunking. Our concern here lies with the United States. The state of affairs (as of March 10) is grim. At every juncture the nation has not been able to answer a single question correctly. The details of this unhappy story are widely known: botched test kit preparation by the Centers for Disease Control and Prevention (CDC), total lack of preparedness despite weeks of notice from the events in China, setting high-risk travelers free to roam public spaces, and no evidence of decisive or competent leadership at the nation's highest level.

But the full story is more deeply revealing. Political scientists in the past several years have often pointed out the qualities of national dysfunction—especially an ineffective government apparatus consumed with internecine warfare—shared by the United States and Italy. Although different in the specifics of dysfunction, the two countries are now running neck-and-neck for last place on this exam. Italy dithered, then attempted the impossible—isolating all of its North. When local officials leaked the news a day early and the press irresponsibly published it, thousands of people hopped on trains or the autostrada—and spread the virus rapidly to every other part of the country.

The United States is still at an earlier stage. To date, unimaginably in a high-tech society spending trillions on "health care," access to diagnostic testing remains virtually nonexistent for most people, and this has totally crippled the nation's efforts at response. Ironically, the assay for detecting the virus in a patient—aside from the complex task of standardization—is a very simple, basic laboratory procedure known as RT-PCR. Millions of labs are capable of doing it, given the genetic sequence data, which is on the internet. And yet, six weeks later, with the exception of a few academic medical centers, access is still through public health labs, with results that are returned far too slowly—a matter of days. In China, patients are given the result while they wait at the facility. Germany also quickly developed an assay, which was adopted by the World Health Organization (WHO), and this has resulted in Germany recording the fewest deaths in Europe. The United States declined the opportunity to follow that model of test development.

Control of an infectious disease epidemic requires two essential ingredients: understanding the epidemiology (and to some extent that also means the biology) of the organism; and implementing prevention, containment, mitigation, and treatment efforts. The relative importance of those efforts is maximum at the first category—namely prevention—and descends from there. To prevent and contain an infectious disease, there must be a public health infrastructure, an informed population, a well-developed plan, and a coordinated medical care system.

The United States has demonstrated, with painful clarity, that it has none of those.

Some states and cities have better health departments than others—notably California and New York City—but the vast majority of the rest are hapless, helpless, underfunded, understaffed, subject to the whims of political appointment, incapable of anything beyond the bare minimum of inspection and surveillance. Faced with a dramatic, poorly understood new challenge, this incompetence is unmasked.

The medical care system is little better. Although prominent experts—at the National Academy of Sciences, CDC and WHO—have worked for years to formulate detailed and highly technical preparedness proposals, which were rapidly modified to reflect the challenge of the new coronavirus, named COVID-19, they are totally disconnected from the operational reality of health systems. At this late date, again with rare exceptions, it is apparent that the vast majority of hospitals, emergency departments, and doctor's offices have not taken the basic steps of gaining prior warning that incoming patients have a respiratory infection, isolating them, and responding by protocol to diagnose and then follow up.

The US health system is not just fragmented but is focused on a never-ending dog-eat-dog fight to make money and stay on budget; rapid response to a public health emergency is a totally foreign concept. Nor does the system have a capacity to think flexibly, gather critical information, make decisions and implement institution-wide protocols in a matter of days, as now required.

But the accumulated vulnerability of US society goes much deeper. As has now been widely discussed, and only partially addressed, millions of people have no access to health care, no insurance, no sick days, no cash reserves, and no access to reliable information. China basically commandeered all social media and pumped out daily updates and directives. Why could not Facebook, Twitter, and other mass media resources do so? Because they are privately owned and have no interest or ability. In the face of this emerging disaster, as one expert put it, there are no high-tech, automated surveillance tools; rather, the critical active ingredient for prevention of rapid spread of disease is people, in fact the whole population.

Would the US population hear and heed consistent public health advice to stay home if sick and call a treatment center to see if their symptoms warrant testing or treatment? Or will they just show up, or pile into emergency rooms, or go to work sick? Initial responses are not encouraging. An atomized, highly stratified and divided, consumer-driven society is not easily converted to a coordinated, collective actor fighting to secure the public good. Does the United States have the personnel and capacity to trace contacts across all the layers of society? In China, much is depending on mobilizing ancillary staff—from receptionists to drivers. Will the US population accept the necessary tradeoff between individual and collective good, and make the necessary sacrifices?

In some ways, in the United States everyone is essentially aboard a *Grand Princess* cruise ship. We are in one great big boat, together, and we are now seeing the results of decades of neglect of essential services, including education, health care, and housing, with no safe harbor in sight. It is widely recognized how investment in public education has declined; how even rich states such as California face a housing crisis; how roadways and bridges continue to deteriorate. Now it's becoming clear that the nation's public health system has been allowed to atrophy along with the other infrastructure necessary for a decent society.

In China, the spread of COVID-19 was "fast and intense." In that phase, only a powerful, intense response will avert disaster, and a recent assessment suggests the early Wuhan phase is being repeated in Italy, without access to the same dramatic interventions. But so far China gets an A, Germany at least an A-, the United Kingdom perhaps a B, Italy will be lucky to pull a D. And the United States? It is on course to flunk. Thanks to the astounding progress in the science and implementation now being reported from China and elsewhere, scientists and doctors are moving toward the first milestone—understanding the disease. It appears—based on what we know now—that "casual" spread may not be that common, and close contact, such as occurs within families, may be necessary. We know that from studies of 300,000 people in China. This knowledge tells us that immediate identification of cases, immediate examination and if necessary quarantine of all contacts, is absolutely crucial. It also means that avoiding mass infection in health facilities, and through health workers, is equally crucial.

Can these lessons be widely assimilated in the United States? Can implementation protocols in health care facilities and communities be put in place fast enough? No one knows, but so far the nation has been doing pretty much all the wrong things. Why? In no small part because of who we are as a nation. Just as individuals with preexisting morbid conditions are at highest risk, US society has accumulated a long, ugly list of social ills and neglected institutions. COVID-19 is not just a rigorous exam; it is a mirror on ourselves. In 1917, the Ottoman Empire was famously labelled the "sick man of Europe." A century later, among the leading industrialized countries, the United States seems to be vying—literally, at the moment—for a similarly ignominious title.

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