LACK OF A RECENT HISTORICAL PRECEDENT

At the time of writing this article, there have been more than 4.7 million confirmed cases of the novel coronavirus severe acute respiratory syndrome (SARS-CoV-2, and approximately 315,000 deaths globally. The World Health Organization declared a pandemic on March 11, 2020.1

Before and since that announcement as well as other warnings, the health care response in the United States was insufficient so as to avoid eventually accounting for 28% of all coronavirus disease 2019 (COVID-19) deaths, despite comprising only 4.25% of the world population.

There is nothing about the biology of Americans that made this inevitable. Rather, systemic readiness and our real-time responses have been major contributors to this outcome. Here we discuss some of the logistical and cognitive failures that, if understood and addressed by present and future policymakers, can be improved upon in the future.

1 | LACK OF A RECENT HISTORICAL PRECEDENT IN THE UNITED STATES

Although outbreaks of dangerous viruses such as Zika, Ebola, Middle East respiratory syndrome (MERS), and SARS have occurred in recent years, the effects have been remarkably limited in the United States. In the case of MERS and SARS, no mortalities occurred in the United States.2,3 A collective sense of being "immune" to problems appearing in other nations likely contributed to complacency and an underappreciation of the true severity of the outbreak.

Further, the perceived distance between other nations and the United States may have been a contributor to the cognitive errors made here. The full implications of today’s truly global economy appear not to have been sufficiently apparent.

One modifiable consequence of this was our failure to produce an adequate supply of testing kits for SARS-CoV-2 despite the availability of the virus’ genomic sequence since January 11, 2020.4 This left us less able to detect outbreaks in many regions; strict guidelines from the Centers for Disease Control and Prevention (CDC) early in the outbreak created a high bar for “persons under investigation,” and many patients who met revised PUI definitions were not initially tested. A second modifiable action relates to insufficient supplies of personal protective equipment for health care workers. Although the morbidity and mortality of this unreadiness are difficult to quantify, we do note that for the first time in modern American history, the CDC was compelled to release guidance on recycling of personal protective equipment, including the use of bandanas by health care professionals when other personal protective equipment was not available.5

2 | THE VARYING REPORTS ON THE CHARACTERISTICS OF THE DISEASE

The true number of cases from China and other early affected countries is likely far higher than reported. Until recently, asymptomatic transmission was underappreciated and mild cases were frequently undocumented.6 First, the overall contagiousness of this disease has been initially understated.7,8 As a result, the need to enact strict shelter-in-place strategies, as achieved in China, South Korea, and elsewhere, may not have been adequately appreciated as necessary.

Suboptimal testing strategies could have contributed to an underestimation of the number of cases, include a failure to account for known rates of false-negative polymerase chain reaction (PCR) tests for SARS-CoV-2,9,10 low rates of testing of patients with mild symptoms, and, in some places, even the underreporting of known cases and deaths by governments.11

Second, the higher calculated case fatality rates cited by the World Health Organization early in the outbreak may have contributed to a sense that a disease with a high case fatality rate might behave more like MERS and SARS, which were geographically contained, and less like pathogens with lower case fatality rates that may seem more “realistic.” For example, the previous SARS and Ebola outbreaks had case fatality rates (CFRs) of 9.6% and between 25% and 90%, respectively.12,13 It appears that the worse the disease, the less Americans believe it will affect them. This error, known as normalcy bias, dictates that “because it has not happened here before, it cannot happen now.”

Moreover, improper comparisons to seasonal influenza may have contributed to an undue sense of safety. Some used lower CFR estimates of COVID-19 seen in some areas (under 1%), to justify comparisons between the seasonal flu (a relatively known pathogen), with SARS-CoV-2 (an unknown one). Although the true CFR of SARS-CoV-2 is likely to be lower than initial reports, that fact should not have been used by public officials to make unwise and inappropriate comparisons.
FEAR OF ECONOMIC CONSEQUENCES

The presumption that only the conclusion that the current outbreak would behave like previous well-known situations higher than that for the seasonal influenza. Thus, the notion that COVID-19 is a disease of the elderly is also false.

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