As US coronavirus cases top 500, Italy initiates mass quarantine

By Benjamin Mateus
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Italy has now initiated a massive lockdown on its northern region that will see the forced quarantine of 16 million people due to the coronavirus. The Italian government has also called for retired medical workers, numbering 20,000, to be brought back to the health care workforce. Italian officials are concerned that the impact of the coronavirus in the resource-poor south of the country will be devastating.

Throughout Europe and the US, the curbing and shutdown of conferences, music festivals, sports events and non-essential travel is being implemented. As of Sunday evening, there were more than 500 cases of the novel coronavirus in the US, according to state and local health agencies and the US Centers for Disease Control and Prevention (CDC). The novel coronavirus, and the disease Covid-19, has killed more than 3,500 people globally and infected over 105,000.

In China, Dr. Jin Li and colleagues from Fudan University from Shanghai, using a simple regression model, have estimated that the global trend in new infections of Covid-19 will be exponential, with a tenfold growth rate every 19 days. They also estimate there were around 34 unobserved founder, or original case, patients. These individuals exported the infection outside of China. The Shanghai authors’ results were published online based on data downloaded from the World Health Organization (WHO) website for the period from January 21 to February 28.

The first reported cases of Covid-19 outside of mainland China occurred in Thailand on January 13, 2020, according to their Ministry of Public Health, based on a lab-confirmed test. By the end of the first week in March, over 100 countries and territories now have confirmed cases, affecting every continent with the exception of Antarctica.

While China reported only 1,400 new infections in the first week of March, stating they are seeing more incidents being imported, South Korea, Italy and Iran have continued to report new cases at an alarming rate, surpassing China. The heart of the eurozone, including Spain, Germany and France, has similarly seen an explosion of cases. Scandinavian countries are the new frontlines of this pandemic.

From February 18 to March 2, the number of cases outside China rose from 999 to 10,288. Statistical information provided by Worldmeter shows that the logarithmic curve is rising linearly for new instances of Covid-19 outside that country. This implies that without any significant intervention on the part of the international community, the number of incidents beyond China will reach 100,000 by mid-March and could approach 1 million in the first week of April.

A similar rapid escalation was noted with the H1N1 swine flu in 2009. However, the difference between the H1N1 pandemic and this one is the severity of the disease, with H1N1 being 100 times less fatal. Approximately 500,000 died from the swine flu out of 2 billion infected.

Fatality associated with Covid-19 has ranged from 0.6 percent to close to 10 percent. Most recently, the WHO fixed this rate at 3.4 percent based on cumulative cases and deaths reported. Inconsistently, the US, Italy and Iran demonstrate worrisome fatality rates, while South Korea has a much lower fatality rate. In Germany, there are now 951 cases, with no deaths reported.

It remains to be determined if these rates are related to extensive testing in some countries that demonstrate a more accurate prevalence of the disease or other factors, such as viral virulence, access to health care, population health and environmental factors such as ambient temperature. The virus appears to be most
Data from the Chinese CDC indicate that a majority of people will remain well after infection, suffering mild flu-like symptoms. However, approximately 15 to 20 percent will need hospitalization and access to supplemental oxygen, supportive care, or even ICU admission and ventilation support. The elderly and those with medical co-morbidities are at increased risk for having the most severe outcomes from Covid-19. The deaths in the US demonstrate that vulnerable populations, such as in the King County nursing home in Washington state, can have fatal consequences. The deaths reported in Florida were of two elderly people who recently returned from Italy.

The importance of access to organized and planned health delivery through broad collaboration among government, health authorities and experts cannot be overstated. The experience in China in the early days of the outbreak saw the general population quickly overwhelm the hospitals in Wuhan, with people turned away. Triaging the sick from those who were distressed by the news of new contagion in their midst created panic and social anguish. Lack of readiness on the part of health care workers as well as sparse material resources may well have contributed to the higher fatality rates that were seen in January and early February.

At a recent forum at the Harvard Kennedy School Institute of Politics over the weekend, a panel of experts shared their opinions on the developing pandemic. Michael Mina, an epidemiologist at Harvard’s T.H. Chan School of Public Health, said, “It’s the most daunting virus that we’ve contended with in half a century or more.”

Helen Branswell, infectious disease and public health reporter, said, “It’s bizarre, but I find myself startled. Having written about the possibility of something like this for years, I still find myself startled that it’s happening, and I don’t know what that is.” Additionally, Dr. Mina stated, “We have an entirely susceptible population. The potential for this to burn through a population very quickly is very high without extraordinary measures.” Because this is a novel, or new, virus the world population has not developed previous immunity to it.

Given the recent egregious errors in managing the evacuees from the cruise ship in Japan, the fiasco in producing and distributing test kits, the utterly rhetorical reaction on the part of the Trump administration and health authorities, the US is at a loss to respond to the rapidly developing outbreak. Over 33 states have now been affected. New York, California and Washington state have declared states of emergency to obtain the necessary funds and resources to manage what they are quickly foreseeing as a severe health care crisis. The three states combined have more than 300 cases out of the 451 cases reported this weekend in the US.

The current fractured nature of the US health care system means hospitals have not coordinated their emergency departments, resources, experts and administrations to work cohesively and in concert. There is an urgent need to develop a strategic long-term emergency plan to reach urban communities as well as rural regions where many medical facilities function on limited budgets and scarce resources.

According to Dr. Mina, “I don’t want to sound defeatist here, but the state of our health care system, the way we have privatized everything about it, for the most part, is going to impact our ability seriously. We cannot create out of the blue new hospital beds. We can’t even test appropriately.” All experts agree that the present administration squandered the four to six weeks that China bought the world to prepare for the virus. While the Trump administration is criminally negligent, the subordination of health care in the US to the profits of the private insurers, pharmaceuticals and giant health care chains is ultimately responsible.