Is It Time to Get Back to Work?

Population Health Sciences

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Editor's note: This blog post reflects a staged strategy for how to safely reopen society following the initial peak of COVID-19 in the U.S. that Drs. Rubin and Offit detailed in a memo to local, state and federal decision-makers.

For weeks, families have sheltered at home to protect themselves and others against a novel coronavirus (SARS-CoV-2) that, in early estimates from overseas, may have killed 3%-4% of those infected. Here at home, we took that to mean that millions of Americans would likely die from this virus if we did not respond quickly. Absent an effective vaccine or treatment, social distancing and sheltering in place were the only available strategies to combat this highly contagious virus—our health care system and public health infrastructure were not prepared for the deluge that was coming. Even with these actions, more than 20,000 people have died in less than one month, mostly in our largest cities.

And we now live in a perpetual state of fear. We are afraid to go to the supermarket, or touch an ATM machine or handrail; we are reluctant to send our children to schools.

We are also witnessing another set of fears. The burden of this, as during most crises, is falling on the shoulders of working families. Many Americans now fear that they won't be able to feed their children or that they'll lose their homes or businesses. At least 22 million people have filed for unemployment, and many will

lose their health insurance while the threat of SARS-CoV-2 remains real.

In the midst of this social and economic crisis, the National COVID-19 Task Force downgraded their original estimates of anticipated deaths from millions to hundreds of thousands to, most recently, 60,000. While we are relieved that the "shelter-in-place" strategy appears to be working, for many, the question has already pivoted to, "what next?"

Then, on April 10, the New York Times published information from a task force analysis that reviewed scenarios for how we might reopen our communities. They predicted that if we move too quickly and without a plan, 300,000 people might die before the end of the summer. But deeper in that analysis was one very promising statistic: that, unmitigated, those 300,000 deaths would occur among 195 million infections. If this were the case, that would mean that the mortality rate would be about 0.15%.

We assume that the 0.15% mortality figure wasn't a typo. However, the task force should confirm the basis for the estimate and provide substantiating data to the public. The lowest mortality estimate to date, this figure does align with a recent analysis from Penn State University estimating that 10 million Americans may have been infected by mid-March, at at time when we had measured only 30,000 cases across the country. It also joins declining estimates from countries using broader population testing, such as serologic data from Germany and PCR testing in Iceland.

If the 0.15% mortality estimate posed by the task force is credible, it is certainly much less than we had feared earlier in the crisis, and just slightly above that of the influenza virus. So, how do we reconcile the devastation we see in our hospitals with a fatality rate that continues to decline? And more importantly, how can the declining estimate of mortality change the lens through which we see this crisis?

Unlike influenza virus, which has a season that extends from October to May, SARS-CoV-2 burst onto the scene in the U.S. at the end of January, spreading quickly and efficiently in a much shorter period of time. In a typical season, influenza infects about 30 million people, killing 0.1% or roughly 30,000. Now imagine eight times as many people getting infected by a virus with a fatality rate that is just a little worse, but exacts its toll in only one month, made worse by the absence of a vaccine. In the case of SARS-CoV-2, the transmission rate is emerging as a key reason for the devastation the virus has caused. The ability to spread with such efficiency has contributed to infection rates far beyond influenza.

That the virus remains extremely contagious, but not as deadly as we feared, is our new reality, our new truth. Yes, we might get sicker than we would with the average flu. But, nearly all the children we have seen at Children's Hospital of Philadelphia have suffered only mild illness; many have been asymptomatic. For every gravely ill young adult we hear about in the news, the risk remains exceedingly low for their peers, especially those without underlying health conditions. And many older adults who are infected with SARS-CoV-2 will need less medical care than we originally anticipated. For these reasons, it becomes harder to justify the continued shutdown of our communities.

We suspect that very quickly additional serologic testing in the U.S. and beyond will detect that many more people have been infected than have been identified, confirming that the fatality rate from SARS-CoV-2 is significantly lower than originally predicted. This will also embolden calls for a return to normal.

At the same time, we should be cautious before we race forward or set "the date," as the declining estimates of overall fatality will surely mask groups that remain at higher risk, including the elderly, those with chronic health conditions and those who live in under-resourced communities. And the sobering truth is that the 20,000 deaths we surpassed this week represents exposure in only 4% of the population, meaning we have a long road ahead and should all hope the vaccine development effort succeeds, and then ramps up quickly. Until then, the contagiousness of this virus might lead to a resurgence of over-filled emergency departments if we are not smart in how we emerge from our confinement. Therefore, we need to be prepared.

First, governments and private industry will need to ensure that we have enough masks, gloves, hygiene products and disinfectants to guarantee that our workplaces are as safe as possible.

Second, we need to commit to an incremental approach, where we return to most of our activities, but continue to restrict gathering sizes and alternative work arrangements, where possible, so that we can reduce transmission and monitor in stages how much this disease resurges.

Third, we need to commit to a strong plan for surveillance and contact tracing of new outbreaks. We must precisely choose how best to deploy our PCR and serologic tests to more intensely monitor and protect health care professionals and those working and living in nursing homes, as well as workers in “high-exposure” industries like mass transit and restaurants. This can also help us determine who remains at high risk and still needs to practice social distancing and how we can get those most vulnerable to the economic impacts of our shutdown back to work.

Fourth, we must focus our testing strategy on our most densely populated communities, not just our cities generally, but those communities within cities, like our immigrant and low-income communities, where living situations can quickly lead to outbreaks, similar to what happened in Singapore in the last couple of weeks.

Finally, we must ensure our nation’s hospitals and their workforces remain prepared and ready to meet the needs of our sickest patients, whether or not they have SARS-CoV-2.

If we commit to these actions, there is a way out of this crisis. Even as we wait for treatments and a vaccine, we can get back to some semblance of normal, or at least a new normal. This will require some adjustments that might be inconvenient, like wearing masks in groups, but it’s worth the tradeoff.

This virus is apparently not as deadly as we originally thought, but it remains highly contagious and can quickly challenge our capacity to care for the sick. For that reason, we must each remain vigilant in our own daily routines so that we keep transmission at bay, while forging forward with the same spirit that has always defined us as Americans.

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