Preeminent COVID-19 scientists urge action to confront Long COVID

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A perspective piece on Long COVID by Ziyad Al-Aly and Eric Topol was published in *Science* magazine today. It reviews the scientific community's current knowledge about the disorder, as well as remaining gaps in knowledge that are critical to address. It concludes with policy recommendations for how society should move forward in studying, preventing and treating Long COVID.

The authors are preeminent scholars and experts on Long COVID. Dr Al-Aly is a physician-scientist at Washington University in St. Louis. He has numerous high impact publications on COVID-19 and Long COVID and recently testified to Congress at a hearing devoted to the disorder. Among other important pieces, he has led studies on the dangers of COVID-19 reinfections, the effects of Long COVID after more than two years, and comparing the effects of COVID-19 and influenza.

Dr. Topol is a scientist and executive vice president for research at the Scripps Institute. He was the senior author on a key review article on Long COVID published in *Nature Reviews Microbiology*. He wrote a critical piece in *Science* early in the pandemic detailing the impacts of COVID-19 on the heart.

These scientists start their perspective by summarizing what is known. The disorder affects every organ system and is frequently debilitating. Millions of people have Long COVID. Indeed, other scientists estimate 400 million people worldwide are afflicted. It affects people of all age groups, sex and genetic composition.

As the authors note, "Long Covid will have wide-reaching effects that are yet to be fully appreciated."

Risk factors include severe infection and reinfection with the virus. Although severe COVID-19 is associated with a higher risk of developing Long COVID, mild or even asymptomatic SARS-CoV-2 virus infections can cause Long COVID. Each reinfection increases risk.

Several hypotheses for the etiology of Long COVID have been put forward and for which there is growing evidence. They include persistent reservoirs of the virus, viral-induced mitochondrial dysfunction, immune dysregulation including autoimmune disorders, inflammation of blood vessel and neural tissues, and disruptions to the microbiome.

In addition to avoiding SARS-CoV-2 infection in the first place, Long COVID can be prevented by vaccines and medications. Vaccines reduce the risk by 15-75 percent. The antiviral combination of ritonavir and nirmatrelvir (branded as Paxlovid) reduces the risk by 26 percent. One randomized controlled trial of the diabetes drug metformin found it reduced the risk by 41 percent.

The piece goes on to detail the challenges of caring for patients with Long COVID:

> Despite this cumulative knowledge on mechanisms, epidemiology and prevention, there are several major challenges. Importantly, the care needs of people with Long Covid are unmet. Patients are often met with skepticism and dismissal of their symptoms as psychosomatic. The attribution of symptoms to psychological causes has no scientific support …

The authors go on to conclude with several recommendations and a warning. First, they call for additional research—and greatly increased levels of government funding to support it—on several aspects of Long COVID, from better defining the disorder, to further elucidation of the biological mechanisms of its genesis, to determining its long-term trajectory and outcomes, to the creation of animal models to facilitate future research, and finally to development of more and better treatments.

Second, they make several policy recommendations. One recommendation is to strengthen the epidemiology and disease surveillance capacity of the public health system, which was devastated prior to the pandemic, and despite a brief resurgence driven by the pandemic response, has increasingly been dismantled.

The chief enabler of dismantling surveillance was the World Health Organization's declaration of an end to the public health emergency over COVID-19. This action enabled governments worldwide to return to pre-pandemic levels of support for disease surveillance, thereby ending nearly all data collection and reporting on COVID-19 and leading to the demise of the

popular COVID-19 dashboard created by scientists at Johns Hopkins University.

Another recommendation is to address the unmet healthcare needs of Long COVID patients. The authors advocate for "training health care providers to recognize and manage Long Covid, expanding access to specialty clinics, and developing care pathways that could be adapted in low-resource settings."

Finally, the authors recommend a renewed emphasis on public health measures to prevent infection and reinfection. They state: "Reinfection, which is now the dominant type of SARS-CoV-2 infection, is not inconsequential; it can trigger de novo Long Covid or exacerbate its severity."

Notably, they urge greater emphasis and adoption of non-pharmaceutical measures including air filtration and masking, arguing: "Updating building codes to require mitigation against air-borne pathogens and ensure safer indoor air should be treated with the same seriousness afforded to mitigation of risks from earth-quakes and other natural hazards."

They also emphasize campaigns to increase vaccine uptake and the development and widespread application of nasally administered vaccines.

The authors end by warning that there is an "urgent need" to address the challenges presented by Long COVID, concluding: "The world must rise to the occasion and address these challenges; the health and well-being of current and future generations depend on this."

The publication of this piece coincides with news that COVID-19 infections are unexpectedly increasing. Instead of past seasonal patterns of a significant fall in infections in February, after the usual burst in January due to holiday gatherings, recent wastewater surveillance data demonstrate instead that levels of infection are still rising. Estimates are that there are 1.35 million infections per day in the United States alone, and COVID-19 levels overall are higher than during 86 percent of the time since the pandemic began.

Thus, with infections and reinfections surging, we can expect millions more to develop Long COVID in the coming weeks and months.

As commendable as these scientists and their recommendations are, their political orientation and brief analysis of who is responsible for the lack of societal progress on Long COVID are misdirected. To the extent they assign blame, they focus solely on the far right, writing:

> Tied with the antiscience, antivaccine movement, a tide of Long Covid denialism is rising. This movement sows doubt about the scale and urgency of Long Covid, conflates Long Covid with vaccine adverse events, and seeks to hamper progress on addressing the care needs of people suffering from this condition.

However, both parties of the ruling class have proven impervious to calls to prioritize the health of people over profits and war. No amount of pleadings, petitions, or entreaties has dissuaded them from the decimation of the public health system and policies of mass infection and death. Joe Biden has not changed course from the policies of his predecessor, having fully endorsed the unscientific and anti-public-health "herd immunity" policy.

In fact, the attacks on public health only escalate. Just this week, as measles outbreaks popped up around the nation, Dr. Joseph Ladapo—the notoriously anti-science, anti-vaccination, anti-public health state surgeon general of Florida—refused to close a Broward elementary school where there have been six cases of measles already. In a letter to parents, he also omitted any recommendation to vaccinate their unvaccinated children. Finally, and most egregiously, he said that parents of measles victims may exercise their own discretion in when to return infected children to school.

These policies fly in the face of over 100 years of public health advances that had previously eradicated measles from the United States. But Ladapo alone is not to blame. As documented just last week in the *World Socialist Web Site*, Biden's Centers for Disease Control and Prevention are dropping their guidelines on isolation of those with COVID-19.

Furthermore, at a hearing last month on Long COVID, neither Bernie Sanders nor any other member of the Senate's Health, Education, Labor, and Pensions Committee made any reference to the surge of COVID-19 this winter. Nor did they call for the massive investment required to halt the pandemic.

The ruling class has demonstrated repeatedly that it is committed to a policy of mass infection, debilitation and death, and not just with respect to the COVID-19 pandemic and its long-term effects. It is also committed unswervingly to the horrors in Gaza and Ukraine.

Repeated appeals to politicians, no matter how authoritative the voices of scientists, are ineffectual in changing these policies. The only force capable of ending the pandemic, ending war and genocide, and placing the well-being of people above that of corporations is the international working class. That force will only succeed in these tasks based on its own socialist political program and organization, entirely separate from the Republican and Democratic parties and the organizations beholden to them.