The politics and science of the monkeypox pandemic

Benjamin Mateus 4 August 2022

Under intense pressure by states, activists and health institutions to respond to the spread of monkeypox, the Biden administration yesterday afternoon declared the new pandemic to be a public health emergency.

On Tuesday, Biden appointed Robert Fenton, the Federal Emergency Management Agency (FEMA) administrator for region nine, to be the national monkeypox coordinator. Dr. Demetre Daskalakis, who currently works at the Division of HIV Prevention of the Centers for Disease Control and Prevention (CDC), with clinical experience on health issues affecting the LGBTQIA+ communities, will serve as his deputy.

In an effort to appease public concern after weeks of official inaction and downplaying of the evolving crisis, the White House statement declared, "Fenton and Daskalakis combined have over four decades of experience in Federal emergency response and public health leadership, including overseeing the operations and implementation of key components of the Biden Administration's response to the COVID-19 pandemic, and leading local and Federal public health emergency efforts such as infectious disease control and HIV prevention." In other words, they are the president's men and can be called to do the White House's bidding, not to bring monkeypox under control, but control the messaging on monkeypox.

Despite the World Health Organization's declaration of a Public Health Emergency of International Concern (PHEIC) nearly two weeks ago, the White House had resisted making a similar announcement even though the three hardest hit states followed en suite—New York, Illinois and California—to declare a state of emergency to obtain much-needed federal resources.

Having mulled the issue of a national declaration for more than a week—during which the president was quarantined with a COVID-19 infection—the White House eventually acquiesced, although it carefully crafted the messaging to reassure the financial markets.

The administration claims it remains in control of these developments and informed the public that they have released monkeypox vaccines to affected regions and increased testing capacity to 80,000 per week, albeit only recently. Notably, unlike COVID-19, where the test kits had to be manufactured from scratch, these tests have been available in the US diagnostic arsenal for decades but had not been acted upon based on early assessments that the monkeypox outbreak would be limited and quickly disappear "like the flu."

Testing and vaccination

Monkeypox testing is labor-intensive, requiring lab workers to swab the lesions, a risky procedure, then extract the virus DNA through multiple steps and amplify the genetic material through PCR (polymerase chain reaction) to obtain a result. The slow process takes two to three days for

results while the patient waits. Additionally, such tests require a physician's order.

A rash develops much later in the course of infection. There is an incubation period of 2–3 weeks before symptoms of fevers, aches, fatigue and enlarged lymph nodes, then a few days later, the characteristic rash develops. Only then can a confirmatory test be conducted. However, as these rashes can be located anywhere on the body, it requires a heightened awareness of a monkeypox diagnosis on the part of health care workers. Since testing is a lagging indicator of community spread, contact tracing and isolation are critical in stemming the spread of infection.

As for postexposure treatment, the vaccination of a person known to have been exposed to someone with a confirmed monkeypox infection must be carried out within three days of the exposure. There is limited data on the efficacy of the Jynneos vaccine in immunizing individuals against the monkeypox virus and even less information on using the current vaccine to treat people after they have been exposed. The guidance has been extrapolated from experience with smallpox, and a comprehensive review can be viewed here.

With the narrow clinical window in treating the exposed and delays inherent in confirmatory testing, a vaccination-only strategy is doomed to failure. Only implementing a broad-based contact tracing and isolation initiative, which must include the isolation of secondary contacts and an expanded ring vaccination program, which means the number needed to vaccinate grows exponentially to cover secondary contacts, can achieve the aim of eradication.

Additionally, patients with confirmed or suspected infection or exposure must also isolate for at least four to eight weeks until they are cleared of harboring the virus or the disease is allowed to run its course and they are no longer infectious. Depending on their symptoms, they need constant evaluation and monitoring by medical professionals.

How the monkeypox virus is transmitted

Perhaps an important consideration that has not had any serious and honest discussion in the media and by Federal public health officials is the potential airborne route of infection for monkeypox. There has been an insistence that infections occur predominately through prolonged contact exposure.

Dr. Donald Milton, a professor of Environmental health at the University of Maryland School of Public Health who is an internationally recognized expert on the aerobiology of respiratory viruses, has written extensively on the airborne nature of influenza and SARS-CoV-2 virus. He wrote a critical review article in 2012 on the implications of the mode of smallpox transmission for biodefense which is an essential read.

After an extensive analysis, he concluded, "Smallpox appears to have

been most effectively and virulently transmitted by fine particle aerosols and therefore should be classified as an anisotropic infection, an infection where the route of transmission influences either virulence and or probability of infection, formerly called a 'preferentially' airborne infectious disease."

He added, "Current recommendations for control of secondary smallpox infections emphasize transmission 'by expelled droplets to close contacts (those within six to seven feet per CDC 2002, 2003). Recommendations include vigilant maintenance of standard, droplet, and airborne precautions. However, emphasis on spread via large droplets may reduce the vigilance with which more difficult airborne precautions are maintained."

The precautionary principle is at play here, meaning that the best interests of the patient and public health require a scientific understanding of how the virus moves and how the various routes of transmission affect the severity of the disease. An assumption that infections occur only through prolonged contact with infected individuals raises the danger of furthering the community transmission of the virus, repeating the catastrophic failures already seen in the ongoing COVID-19 pandemic.

Without a coordinated effort to bring the expanding outbreak to an immediate end, the monkeypox pandemic could begin impacting the labor force and manufacturing in the next few months. A worker at Sterling Heights Assembly Plant in Michigan recently informed the *World Socialist Web Site* that there had been a confirmed case of monkeypox at the plant, which the union and management are attempting to cover up.

The announcement of the appointment of Fenton and Daskalakis to coordinate a "strategy and operation to combat the current monkeypox outbreak, including equitably increasing the availability of tests, vaccinations, and treatments," is nonsense. Given the experience with the failed and criminal policies allowing COVID-19 to spread unchecked, these statements are purely sentiments for political purposes.

Problems in vaccine production and storage

What is not being mentioned is that the shortage of vaccines is real, and the effort to ramp up manufacturing faces a bottleneck, with only a single pharmaceutical company in Denmark, Nordic Bavarian, able to produce the smallpox vaccine known in the US as Jynneos. What is apparent is that there is no clear and compelling strategy other than reaction down the line

Worse, Jynneos (a non-replicating smallpox vaccine) and the second-generation vaccine ACAM2000 (a live smallpox virus) were manufactured for use against the possible reintroduction of smallpox in the event of bioterrorism or accidental lab spillover but have never been tested against monkeypox. *MedPage Today* wrote recently, "[N]o one knows how well the Jynneos vaccine will serve as a get-out-of-infection-free card."

The much-quoted 85 percent effectiveness of smallpox vaccines against monkeypox is based on a very limited study conducted in Africa in the 1980s that showed cross-protection. However, *MedPage* noted, "One data expert calls its findings 'pretty weak.' Other studies have only been conducted in animals." No studies have been undertaken on ACAM2000 and Jynneos. Dr. Jay Varma, director of the Cornell Center for Pandemic Prevention and response in New York, recently explained, "It is absolutely critical that public health officials work on messaging this uncertainty to people being vaccinated."

Though the US has more than 100 million doses of ACAM2000 smallpox vaccines available, they have remained largely untouched. The vaccine needs to be injected into the skin using a two-pronged needle

utilizing a series of jabs to provide a small dose of the live virus into the skin. Health care workers would require to be trained to do this. Evidence of vaccination involves the formation of a small abscess a week later for confirmation, and some may need another jab.

ACAM2000 can also severely compromise those who have an underlying immunocompromised state. The rare, dangerous side effects of ACAM2000 include a six in 1,000 chance of heart inflammation, with one or two people in a million expected to die. Jynneos was intended for this population of around 66 million eligible people in high-risk households, according to the *New York Times*. The vaccine is an injection administered in two doses four weeks apart, which was criticized as not being ideal in a bioterror attack.

In 2013, the US had around 20 million doses of Jynneos, previously known as Imvamune, sitting in freezers in the Strategic National Stockpiles. In 2015, another 8 million doses were added due to the three-year limit on their shelf life. However, federal agencies decided at the time to allow vaccine doses to expire without replenishing the stockpile as they waited for a freeze-dried version of the vaccine to be developed and approved, a process which has been dragging longer than expected. By the time monkeypox appeared in the US mid-May, only 2,400 usable doses were left in the stockpile.

The *Times* wrote, "From 2015 onward, the United States instead placed orders for hundreds of millions of dollars of bulk vaccine product—basically raw vaccine stored in large bags, which would be converted to freeze-dried doses once the company perfected the process and had the necessary FDA approval."

The 300,000 doses of vaccines recently ordered were sitting in Denmark and had to be filled by a contractor and then shipped back to the US in batches in a wait-and-see approach taken by the administration. Due to strict temperature requirements, the Danish pharmaceutical firm has stored the bulk of 1.4 million doses ordered for the US.

Bavarian Nordic's new fill-finish facility, which was up and running in 2021, has only recently been inspected by the FDA and greenlighted for fill and shipment. However, logistical details mean there will be continued delays in seeing large quantities of vaccines delivered to the US or any other country seeking to vaccinate their population.

As explained by a Bavarian Nordic spokesman, when an order is placed, the company has to receive a container known as a "cocoon" that has to be frozen to temperature for five days before the vaccines can be packed and shipped. Additionally, the recent airline strikes and flight delays have impacted the delivery of these vaccines.

According to the CDC, as of August 3, 2022, with more than 25,000 cases globally, 6,617 infections have been documented in the US. The global seven-day rolling average of daily monkeypox cases is presently at 1,200 and rising. For the US, that figure has reached 532 per day. Presently, New York state is the epicenter of the monkeypox pandemic in the US, with 1,666 total cases. California has recorded 826 cases, and Illinois, Texas, Florida and Georgia each have more than 500, indicating a broad geographic spread of the disease.

The first case in the US was diagnosed on May 18, 2022. One month later, on June 16, cumulative cases surpassed 100. By July 13, cases surpassed 1,000. At the present rate, by mid-August, the cumulative figure will more than exceed 10,000 infections. The rapidity of the spread has caught the entire federal public health infrastructure off guard once again, despite the repeated calls by principled health experts about the burgeoning threat.

Despite the acclaimed rise in testing capacity, cases are climbing much faster. For such patients, a confirmatory test is required to access antivirals like tecovirimat, which was approved to treat smallpox disease in adults and children but can cause significant side effects. Meanwhile, as of this writing, the CDC has yet to make monkeypox a notifiable disease for states.

Additionally, the number of tests and their positivity rate have not been publicly available. This fact raises the question of whether contact tracing is being conducted earnestly. Caitlin Rivers, an infectious disease epidemiologist at Johns Hopkins Center for Health Security, told *Wired*, "If we had those metrics, we would have a better understanding of how much of our existing capacity is being used and whether it's reaching enough people to be able to say confidently that we're finding cases."

Even though most cases remain among men who have sex with men, the number of women infected is growing. For instance, in Indiana, the Department of Health reported that 20 percent of the 30 confirmed cases on July 22 were among women. The case count has risen to 45, and two children are among the infected.

Five children have thus far been confirmed with monkeypox in the US. These must be seen as sentinel events, a forewarning of the spread of monkeypox into more vulnerable populations, especially as the school year will soon see millions of children return to in-person classes.

The social issues raised by a second lethal pandemic are being suppressed by the likes of Governor Ron DeSantis of Florida, who vehemently rejected any concerns over monkeypox during a recent press conference. He declared, "We are not doing fear, and we are not going to go out and try to rile people up and try to act like people can't live their lives as they've normally been doing because of something."

Given the last three years with COVID-19, it isn't difficult to recognize that such sentiments will prevail within the corporate elite and its political servants in both capitalist parties. But there is scientific guidance that has been extrapolated from experience with smallpox, and a comprehensive review can be seen here.



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