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Controlling mpox requires inclusive, global efforts

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In 2022, mpox (formerly called monkeypox) dominated the news as outbreaks of the disease cropped up in more than 120 countries. Then, as case counts dwindled in countries like the U.S.—thanks to the speedy

rollout of educational measures and vaccines to at-risk populations—so did the media coverage.

Yet, the mpox virus (MPXV) itself did not disappear. Spurred by a more virulent strain of the virus, outbreaks of unprecedented scale and scope have continued to rage in the Democratic Republic of the Congo (DRC), with children being the most heavily impacted.

Mpox has spread to neighboring African countries—and outside of Africa too. On the tails of a confirmed case in Sweden, the World Health Organization (WHO) declared mpox a public health emergency of international concern on Aug. 14, 2024.

The ebb and flow of mpox cases around the world indicates that the disease is, and will always be, a global health issue. Preventing outbreaks, therefore, depends on providing support and resources for mpox hot spots to manage the disease.

Mitigating mpox: All hands on deck

Although the first known case of mpox was reported in the DRC over 50 years ago, the disease was long ignored by nations outside Africa until its emergence in places like the U.S. and Europe. But if the past few years have revealed anything, it is that mpox is an "all of us" problem. This means that managing mpox requires shining a light on, and facilitating and supporting action in, impacted countries within Africa.

During the 2022 global outbreak, ASM and partner organizations to the Department of Health and Human Services issued a letter outlining what must be done to prevent mpox. The recommendations include:

- Ensuring adequate and equitable distribution and administration of mpox diagnostics, vaccines and treatments.

- Using transparent, timely, non-alarmist and fact-based messaging to educate communities about mpox spread and prevention.
- Increasing testing capacity and accessibility.
- Bolstering public health infrastructure, including strengthening the workforce and collecting, sharing and summarizing data to inform the development of effective disease control measures that promote health equity and support.

Like mpox itself, these steps are not geographically isolated. Integrating and supporting all global regions, especially endemic countries, in disease control efforts is imperative for mitigating the spread of the disease.

Jean Kaseya, M.D., Director General of the Africa Centers for Disease Control and Prevention (Africa CDC), said it best. "Africa has long been on the frontlines in the fight against infectious diseases, often with limited resources. The battle against mpox demands a global response. We need your support, expertise and solidarity. The world cannot afford to turn a blind eye to this crisis."

Preventing disease: A question of vaccine equity

There are no treatments for mpox (a smallpox antiviral, tecovirimat, is still being tested in people with mpox). The best method for dealing with mpox is to lower the risk of infection and severe disease. In this regard, vaccination is a critical tool. Two vaccines are available for mpox: Jynneos, produced by Bavarian Nordic, and LC16, manufactured by the Japanese company KM Biologics, with the former being used most extensively worldwide.

But "worldwide" here is not all-encompassing. The accessibility of vaccines in the DRC has been extremely limited. This contrasts with the rapid distribution of vaccines in the U.S. and Europe during the 2022

outbreak, and their continued availability in these areas and a plethora of other countries outside of Africa.

Infrastructural and economic barriers mean many African countries, including the DRC, are limited in their ability to produce vaccines; they generally rely on supplies from wealthier nations. However, such donations have been a trickle, relative to the number of doses needed to manage the crisis.

Vaccine equity is, thus, a paramount issue in the global control of mpox. It's a familiar pattern in the world of infectious disease: low-income countries faced with high disease burdens are bereft of the tools high-income countries possess to control the spread if/when that disease ends up on their doorstep.

Mpox illustrates, however, that mobilizing resources to control a pathogen before it hits the world stage is critical, not just for saving lives and preserving health in hard-hit (and largely neglected) areas, but also to limit the chances of something small from becoming something very big.

Recent outbreaks throughout Africa—where mpox cases are up 160% compared to 2023—offer a poignant example, in part because of the virus causing infections. Of the 2 known MPXV clades (a group of viruses that evolved from the same common ancestor), clade I is more virulent than clade II (10% vs. 1% mortality, respectively).

While a clade II virus caused the 2022 global outbreak, clade I MPXV—including a new strain (clade Ib) that emerged in late 2023 and is mutating rapidly—is responsible for outbreaks in the DRC and neighboring countries, prompting elevated concern about its potential global spread.

With that, after a 2-year delay, there has been some recent progress toward enabling vaccinations in the DRC and other affected African countries. Various countries, including the U.S., Japan and Germany, pledged to donate vaccines to the DRC.

Bavarian Nordic partnered with the Africa CDC to advance the organization's pledge of delivering 10 million doses of the mpox vaccine by the end of 2025. The company has the capacity to supply 2 million doses this year, in addition to existing orders, and aims to enhance vaccine manufacturing capabilities in Africa.

WHO also launched a 6-month plan for coordinated global, regional and national efforts to support mpox vaccination, surveillance, preparedness and response activities.

Equitable mpox prevention requires more than vaccines

As it stands, the DRC, and other impacted countries in Africa, have largely relied on non-vaccine measures to contain mpox outbreaks.

MPXV, a zoonotic virus, can be transmitted to humans via contact with infected animals. It spreads between people through direct contact with mpox rash, scabs or bodily fluids from someone who is infected, as well as through respiratory secretions and by touching objects and surfaces that have been used by someone with mpox.

According to WHO, behaviors like isolating from others when sick, avoiding touching common items/disinfecting them frequently, practicing good hygiene (i.e., washing hands), wearing a mask and covering lesions around other people are important for infection prevention.

The U.S. Center for Disease Control and Prevention (CDC) provides additional insights about how to lower the risk of infection via sexual contact, which emerged as a key transmission route in the 2022 multi-country outbreak and continues to play an important role in viral spread.

But it's worth noting that following through on these measures requires having the space and means to do so. Mpox is a preventable illness—but there is a jump between "preventable" and "prevented." How far of a jump that is depends on societal, geographical and economic factors that can lengthen or shorten the leap.

For instance, an ongoing humanitarian crisis in eastern regions of the DRC has fueled mpox outbreaks in the area, especially in areas with extreme poverty and within overcrowded refugee camps with limited resources. People in certain impacted regions may not know what mpox is and how it spreads, which is also critical for effective prevention.

Community engagement and effective public health communication and education about mpox are needed, in part to combat mis/disinformation, stigma and discrimination about the disease.

Understanding these factors provides an important contextual basis for determining how to facilitate supportive, specific, meaningful and feasible action in heavily impacted regions.

Better for everyone

Mpox is not a 1-solution problem, the same way it is not a 1-country problem. It requires an integrative approach encompassing communication, access to medical care, vaccination, surveillance and treatments.

The more the global community can, with empathy and care, facilitate

such multi-faceted solutions in all regions—not just when outbreaks become unprecedented in reach and devastation—the better off everyone will be.

Provided by American Society for Microbiology

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