

## Commentary

# *'Monkeypox, where is your rage?': The racialization, sexualization, and securitization of global health*

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Tankut Atuk<sup>1\*</sup>, Francesca Cannon<sup>2</sup>

<sup>1</sup> Rensselaer Polytechnic Institute, Troy, USA; <sup>2</sup> University of Minnesota, Twin Cities, USA

\* Corresponding author: Tankut Atuk, atukh@rpi.edu

*With the purposes of identifying the underlying challenges of global and public health governance of outbreaks, this paper explores three key themes that emerged in response to the 2022 mpox epidemic: the belated change of disease nomenclature from monkeypox to mpox; the classification of mpox as a sexually transmitted infection (STI); and the unpreparedness of health agencies to vaccinate impacted populations. The paper makes the case that, because of the global and public health tensions arising from racialized nomenclatures, sexualized classifications, biosecuritized borders, and monopolized vaccines, national and international agencies failed in providing an adequate and comprehensive response to the latest mpox pandemic, which contributed further to the pathologization of already vulnerable and stigmatized population groups.*

## Introduction

Following global health scholar Carlo Caduff's (2020) paper, *What went wrong: Corona and the world after the full stop*, we ask the same question of *what went wrong* in global and public health responses to the 2022 mpox outbreak. We focus on three themes: the belated change of disease nomenclature; the impetus to reclassify mpox as a sexually transmitted infection; and the drastic unpreparedness of public and global health agencies to timely vaccinate at-risk individuals. Racialized nomenclatures, sexualized classifications, biosecuritized borders, and monopolized vaccines prevented successful mitigation of the latest mpox pandemic and contributed to the further pathologization of already vulnerable and stigmatized demographic groups, both locally and globally. Unlike the COVID-19 pandemic, which resulted in the death of millions due to the absence of established treatments and preventive measures, compounded by political and economic interests not aligning with public and global health priorities (Atuk & Craddock 2023), mpox was not caused by a novel pathogen. Hence, the errors we evidence in addressing the 2022 mpox epidemic do not originate from deficiencies in medical technologies and knowledge. Rather, they arise from a persistent failure to decolonize global health and to transform structural inequalities in the burden of disease for stigmatized communities and countries. Inquiring into the underlying rationalities of public and global health governance is not merely to pinpoint errors, but to gain understanding of how to approach viral outbreaks more responsibly, care-fully, and even more slowly so that committing the same mistakes will not be inevitable.

### *How (Not) To Do Things With Words?*

Mpox was first identified in 1958 in monkeys—hence, the name *monkeypox*—during an animal outbreak in Copenhagen, Denmark, and was then found to be transmissible to the human population in 1970, when the virus was isolated from a pox-like illness in a 9-year-old boy in the Democratic Republic of the Congo (DRC). Historically, the understanding of monkeypox was guided by the narrative of its localized nature—i.e. diseases are bound by location—affecting communities in the rainforests of Central and West Africa, particularly in Cameroon, DRC, Liberia, Ghana, Sierra Leone, and Cote d'Ivoire. However, the summer of 2022 witnessed a paradigm shift in epidemiological assumptions as mpox cases were reported in regions outside where the virus is considered endemic, necessitating a global outbreak crisis response, built on rapid and coordinated mitigation. As the global discourse increased surrounding mpox's emergence outside of Africa, harmful social implications of the nomenclature of the virus were raised by African scientists and activists around the world, who recommended the variant names be revised (Happi et al. 2022).

Clade names reified the idea that mpox was an African virus, tying disease to location and race/nationality. Before the clade names were officially changed to Clade I and Clade II in August 2022 following considerations of 'rationale, scientific appropriateness, extent of current usage, pronounceability, usability in different languages, absence of geographical or zoological references, and the ease of retrieval of historical scientific information' (WHO 2022), the categorization of mpox virus variants was confined to two groups, namely the Congo Basin and West African strains. Using these terms to describe clades carries connotations that stigmatize specific regions and their inhabitants, inappropriately labelling it as an 'African' virus (Happi et al. 2022), and reinforcing the misleading public perception that only people in Africa are at risk. Outbreak narratives are influenced by global racial dynamics that propagate Western superiority, depicting Africa as a 'diseased continent' characterized by cultural, sexual, and medical primitivism (Wald 2008). Moreover, the original name of the virus itself, *monkeypox*, despite the virus being more frequently found in rodents, further racializes the animal historically associated with African and Black people as a justification for social and scientific racism (Panaitiu 2020). As sociologist Trevor Hoppe (2018) writes in relation to the misleading naming of the Spanish Flu, naming is not merely 'a banal scientific fact but, instead, a social production that reflects complex social realities and politics'. Disease narratives do not just identify the 'culprit,' but reflect and create a reality that deems some lives culpable at best and disposable at worst. Language about viruses is a powerful tool, constructing a shared reality that influences public perception, government actions, and healthcare interventions, ultimately shaping who receives treatment and who suffers disproportionately.

As the World Health Organization (WHO)'s treatment of the recent mpox outbreak renders visible, 'Global Health' still signifies the health of the Global North, despite all the critical calls to decolonize the field. This does not suggest that Global Health exclusively prioritizes the wellbeing of the Global North. Rather, it indicates that the timing and substance of decisions and policies frequently align with the onset of health risks within the Global North. In the case of mpox, we can observe this trend both in the delay to take mpox as a serious concern and in the delay to rename it. The timing of when a disease is declared an international emergency, and when it is no longer considered one, is crucial. In May 2022, the global circulation of the mpox virus was identified in disparate European and North American countries, causing a Public Health Emergency of International Concern to be declared by the WHO. Recognizing the outbreak that predominantly impacted men who have sex with men as an international emergency marked a significant step towards a more inclusive global health approach. However, decades of warnings from African scientists about the impossibility of containing mpox within a single continent were largely overlooked until the virus began affecting populations in Europe and North America. As early as 2017, Dr. Adesola Yinka-Ogunleye, an epidemiologist at the Nigeria Centre for Disease Control, reported atypical transmission patterns of mpox. Yinka-Ogunleye expressed her frustration in the face of what looked like a coordinated indifference by saying that 'the world is paying the price for not having responded adequately' (Yinka-Ogunleye 2019). Even though the WHO announced that mpox was no longer an international emergency in May 2023 because the cases were falling in North America and Europe, the pathogen was still an ongoing problem in several African nations that required international attention. As expected, the WHO declared mpox to be an international emergency once again on August 14 when the deadlier Clade I of mpox began spreading across several countries in Africa, particularly the DRC, with fragile public health systems, suggesting a high likelihood of a looming global outbreak (WHO 2024).

Unsurprisingly, a day after this statement, the first case in Europe was recorded in Sweden: revoking the international emergency was premature.

Timing also matters for decisions around the stigmatizing name. Although the WHO is responsible for the best practices in naming diseases with the goal to ‘minimize unnecessary negative impact of names on trade, travel, tourism or animal welfare, and avoid causing offense to any cultural, social, national, regional, professional or ethnic groups’ (WHO 2015), the organization waited until the virus became a concern for the Global North to rename ‘monkeypox’, after consultations with several advisory groups, including experts on the medical and scientific, and classification and statistics committees, which included representatives from government authorities of 45 different countries (WHO 2022). The WHO encouraged people to propose new names for monkeypox by submitting online suggestions. While this participatory approach to global health decision making processes is laudable, the impetus to change a pathogen name marked by racist implications which could prevent people from getting tested and seeking treatment only became a matter of concern when those at risk were almost exclusively from the Global North.

### **Is Mpox a Sexually Transmitted Infection?**

If the politics of naming mpox is one indicator of how the needs of the Global North shape global health responses, the scientific endeavor to reclassify the virus is another example of how the Global North is taken as the reference point for classifying diseases. The global mpox outbreak of 2022 has resulted in a total of 87 thousand cases and 112 fatalities across 110 nations since its onset in May 2022 (WHO 2023). Contrary to most previous cases of mpox, where the primary mode of transmission was zoonotic (from animal to human), in 2022, the virus was predominantly contracted through direct contact with infected individuals. The majority of cases globally have been observed in adult males, predominantly associated with sexual interactions with other men. Within the USA, 96% of cases have been reported in cisgender men, and 76% of cases involved individuals engaging in male-to-male sexual contact (Thornhill et al. 2022).

The results of Thornhill’s study sparked concern among queer people, sexual health advocates, and global and public health practitioners. Although non-sexual contact remains key to spread in endemic countries, many were now considering whether mpox should be classified as a sexually transmitted infection (STI). Scientific opinion was divided. On the one hand, some advocated for classifying mpox as an STI based on the epidemiological evidence of the latest global outbreak (García-Iglesias et al. 2022). While identifying both benefits and potential risks of characterizing mpox as an STI, García-Iglesias and his colleagues (2022) underlined the importance of communicating accurate information to the public and authorities both to enable at-risk communities to take precautions and to motivate local and international agencies to target their interventions more effectively. On the other hand, decolonial perspectives questioned classifying mpox as an STI on the basis of a one-time epidemic in North America and Europe rather than the complex disease dynamics of Central and West Africa (Hazra & Cherabie 2023). A Western-centric STI framework potentially diverts crucial attention and resources away from understanding and addressing the unique, predominantly non-sexually transmitted, epidemiological patterns and cultural contexts of mpox in these areas. Furthermore, the perils of classifying mpox as an STI do not only stem from epistemically prioritizing the epidemiological context of Global North, but also from unwittingly contributing to further tying same-sex relationships with communicable diseases, which can exacerbate stigmatization and discrimination against LGBTQ+ communities, reinforcing outdated and damaging public health narratives (Aquino et al. 2022, Smith et al. 2024). Public health messaging needs a more nuanced approach that avoids reinforcing stereotypes and instead focuses on the diverse transmission dynamics of the disease. Such an approach is crucial in ensuring inclusive public health strategies.

The ongoing debate about the classification of mpox serves as a poignant reminder of the complex trade-offs inherent in public and global health decision-making, where urgent action must be tempered with considerations of equity and social justice. The primary imperative is understandably to mount swift and decisive responses. However, the emphasis on rapid response, often championed in outbreak science (Lancaster & Rhodes 2023), may not necessarily yield the most beneficial outcomes over the long term, particularly for marginalized populations. When the impetus is to act rapidly, we risk misidentifying what really matters during

health emergencies. In the case of mpox, rather than addressing critical issues such as vaccine supply inadequacies and racial disparities in vaccination, the scientific discourse swiftly fixated on the classification of mpox as an STI. This focus, while technically justified, risked exacerbating stigma against gay and bisexual men, while rendering the reality of mpox in Africa even less visible. Instead, in global and public health governance of diseases, we could adopt a ‘slow dis-ease’ approach, centering sustainable and care-ful interventions rather than speed and technical accuracy (Lancaster & Rhodes 2023). The principle of *slow dis-ease* teaches us that even in the light of the current evidence about the ongoing mpox outbreak in Africa following sexual networks (WHO 2024), we should exercise caution before changing a disease classification without understanding its implications for different contexts. We must consider important questions, such as the impact on public health if mpox were classified as an STI in countries where homosexuality and sex work are punishable by law or socially stigmatized.

### **‘Monkeypox: Where Is Your Rage?’**

In the context of the recent mpox outbreak, vaccine distribution evidences the stark failure to decolonize global health. The global production of smallpox vaccines, which protect against mpox, remained monopolized by three pharmaceutical company for decades (all catering primarily to government stockpiles for potential use in case of bioterrorism), with demand for the vaccine in the Global North impacting its availability in Africa. On the same day that Boston confirmed its first US case of mpox, Bavarian Nordic, the manufacturer of Jynneos, the only vaccine using non-replicating virus, signed a \$300-million agreement with the US Department of Health and Human Services that secured 13 million doses for the USA. Additionally, the European Union, Canada, and other undisclosed nations also purchased vaccines from the Danish biotech company (Asiedu 2023, Bavarian Nordic 2022). These multimillion-dollar agreements enabled the wealthiest nations to prioritize mpox vaccine access to protect their populations and build reserves for future emergencies. This pattern mirrored the distribution of COVID-19 vaccines, where affluent countries acquired almost all the available and upcoming vaccine supplies, leaving less wealthy nations unable to safeguard their healthcare workers and vulnerable populations.

The monopolization of the smallpox vaccine raises significant concerns about the structure and dynamics of pharmaceutical industry practices, particularly in relation to intellectual property rights and access to life-saving vaccines. Bavarian Nordic held exclusive control over the intellectual property rights of the vaccine, effectively limiting production to a single facility in Denmark— even without intellectual property protection, it is improbable that other manufacturers would enter the market since mpox was not a threat for wealthy countries (Craddock 2007). This monopolistic control over manufacturing had profound implications during critical junctures such as the recent global outbreak, where swift and widespread vaccine distribution was paramount for effective containment efforts. Such control influences both the accessibility of vaccines and which regions and populations receive priority in vaccine distribution efforts. Thus, wealthier nations such as the USA secure vaccines, leaving African countries, with longer histories and more severe cases, at a disadvantage. Ahmed Ogburn, acting director of the Africa CDC, noted that only small stockpiles were available to treat patients and healthcare workers in African countries affected by mpox cases (Cheng & Asadu 2022). Ogburn also expressed his frustration: ‘even if we wanted to buy, there is nowhere to buy because they are manufactured in modest numbers and then countries stockpile them in case they need them, while where it is actually needed, on the continent of Africa, we don’t have access’ (Asiedu 2023).

What is particular about mpox vaccine inequality is that, initially, not only African people but also US citizens suffered from the absence of vaccines, although for radically different reasons. In July 2022, a group of queer people in New York organized a protest to criticize the lack of government action to respond to the rising numbers of mpox infections and, more importantly, to call out the vaccine unavailability that caused alarming waves of panic among the public. One placard at the protest read ‘monkeypox: where is your rage?’ - a direct reference to HIV/AIDS activism and ACT UP’s emphasis on transforming rage into direct action in the hopes of preventing more young people from dying. Forty years later, queer people were enraged again, and justifiably so, as thousands had to wait in long lines, sometimes more than six hours, to get vaccinated, often to no avail. Those who were lucky or privileged enough to know how to navigate a dysfunctional public

health system managed to get a vaccine appointment after countless phone calls, yet those without free time or medical literacy were left unvaccinated and vulnerable. According to CDC (Kota 2022), the black and Latinx populations who were disproportionately impacted by mpox also experienced discrepancies in accessing vaccines, especially early in the outbreak. What is of critical importance here is that just a few years ago, the United States possessed a significant stockpile of vaccine which could have helped mitigate the spread of mpox during the 2022 outbreak.

In a quintessential example of ‘pharmaceuticalization of security’ (Elbe 2018), in the years following September 11, the United States amassed a reserve exceeding 100 million doses of smallpox vaccines against the potential threat of bioterrorism, derived from formulations instrumental in eradicating the virus. Branded as Dryvax and ACAM2000, these vaccines employed a live virus that undergoes replication and may induce adverse effects. Hence, the USA aimed to develop a more efficient smallpox vaccine with reduced side effects. Subsequently, in 2003, substantial financial investments were made into Bavarian Nordic, as uncovered by the investigation of journalist Joseph Goldstein (2022). By 2013, Bavarian Nordic successfully supplied the Strategic National Stockpile with a total of 20 million doses of its newly developed smallpox vaccine Jynneos, also effective against monkeypox (Bavarian Nordic 2014). The success of Jynneos comes from its modified genetics that makes it non-replicating, meaning there is no risk of virions reproducing in human cells—unlike Dryvax and ACAM2000. Nonetheless, the shelf life of the vaccine is remarkably short, which is why the USA lost 20 million doses of it. As the stockpile was expiring, federal authorities opted not to promptly restock vaccines. Instead, they invested in the development of a freeze-dried version of the vaccine that would significantly extend its three-year shelf life—it was not foreseen that the production of the freeze-dried vaccine would take so long due to a slow Food & Drug Administration (FDA) review process (Goldstein 2022). While the stockpile was expiring, the USA did not make the vaccine available to countries with ongoing outbreaks, where 20 million doses could make a difference.

Militarized biosecurity rationales have become inseparable from global and public health responses to infectious pathogens, especially under ‘crisis’ and ‘outbreak’ frameworks favoring interventions designed to secure nations from so-called external threats rather than to create healthy, resilient publics. Hence, the (bio)securitization of smallpox by the USA should not be considered as an isolated incidence but a result of the growing biosecurity trends in global and public health governance. This shapes US government resource decisions, and the channeling of attention and resources disproportionately to the development of a vaccine that would be necessary in the distant event of a bioterrorist attack, without similar emphasis on an ongoing global health problem that burdened several African nations, which could easily spread beyond the continent. Where global and public health governance is securitized, the result is the prioritization of ideologically fabricated fears over immanent pathogenic threats.

## Conclusion

To conclude, we suggest implications for policy and advocacy given that mpox and similar pathogens (will) continue to pose challenges for public and global health in the future. First, systematic and sensitive approaches to naming diseases need to avoid stigmatization and racialization through disease names that perpetuate stereotypes or cause harm to specific communities. Second, when classifying diseases, such as mpox as an STI, it is essential to consider the broader epidemiological evidence and avoid definitions that may stigmatize or misrepresent disease dynamics that might vary across different regions and populations. Third, as many have argued, there is a need to reform vaccine distribution policies to ensure equitable access across all countries, particularly between the Global North and South. How we ensure vaccine distribution prioritizes public health needs over market dynamics, ensuring that low- and middle-income countries receive adequate supplies to manage outbreaks effectively, is an ongoing challenge in the context of marketization and securitization drivers. Fourth, the mpox experience reiterates the urgent need to dismantle colonial legacies within global health frameworks by promoting local leadership and expertise in disease response strategies. This goes beyond ensuring that local voices are prominent in global health decision-making. More importantly, it involves investing in local healthcare infrastructures, fostering education and training programs within endemic regions. Implementing these policies requires a concerted effort from global health organizations, national governments,

and civil society to ensure that responses to health crises are equitable, scientifically sound, and culturally sensitive. This approach not only addresses immediate health needs but also works towards a more just and equitable global health system.

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## References

- Asiedu, K. G. (2023) *Africa waits for its share of mpox vaccines, a year after outbreak*. LA Times. <https://www.latimes.com/politics/story/2023-05-30/a-year-after-outbreak-africa-waits-for-its-share-of-mpox-vaccines> (Accessed 19th Sept 2024)
- Atuk, T., & Craddock, S. L. (2023) Social pathologies and urban pathogenicity: Moving towards better pandemic futures. *Urban Studies*, 60(9), 1668–1689. <https://doi.org/10.1177/00420980221079462>
- Aquino, Y.S.J., Cabrera, N., Salisi, J., & Yarcia, L.E. (2022) Monkeypox and the legacy of prejudice in targeted public health campaigns. *BMJ Global Health* 7, e010630. <https://doi.org/10.1136/bmjgh-2022-010630>
- Bavarian Nordic. (2014). *Annual Report*. <https://www.bavarian-nordic.com/media/185756/2014-ar-uk.pdf>
- Bavarian Nordic. (2022). *Bavarian Nordic to manufacture first freeze-dried doses of smallpox vaccine upon exercise of contract option by the U.S. government*. <https://www.bavarian-nordic.com/investor/news/news.aspx?news=6569> (Accessed 19th Sept 2024)
- Caduff, C. (2020) What went wrong: Corona and the world after the full stop. *Medical Anthropology Quarterly* 34, 467–487. <https://doi.org/10.1111/maq.12599>
- Cheng, M., & Asadu, C. (2022) As resources go to fight European and American monkeypox outbreaks, some see inequity in African response. *PBS NewsHour*. <https://www.pbs.org/newshour/world/as-resources-go-to-fight-european-and-american-monkeypox-outbreaks-some-see-inequity-in-african-response> (Accessed 16th March 2024).
- Craddock, S. (2007) Market incentives, human lives, and AIDS vaccines. *Social Science & Medicine*, 64(5), 1042–1056. <https://doi.org/10.1016/j.socscimed.2006.10.006>
- Elbe, S. (2018) *Pandemics, Pills, and Politics – Governing Global Health Security* (1st edition). Johns Hopkins University Press.
- García-Iglesias, J., Nagington, M., Pickersgill, M., Brady, M., Dewsnap, C., Highleyman, L., ... & Webb, J. (2023) Is mpox an STI? The societal aspects and healthcare implications of a key question. *Wellcome Open Research* 7, 252. [10.12688/wellcomeopenres.18436.2](https://doi.org/10.12688/wellcomeopenres.18436.2)
- Goldstein, J. (2022) How the U.S. let 20 million doses of monkeypox vaccine expire. *The New York Times*. August 1st. [nytimes.com/2022/08/01/nyregion/monkeypox-vaccine-jynneos-us.html#:~:text=At%20several%20points%20federal%20officials,its%20three-year%20shelf%20life](https://www.nytimes.com/2022/08/01/nyregion/monkeypox-vaccine-jynneos-us.html#:~:text=At%20several%20points%20federal%20officials,its%20three-year%20shelf%20life) (Accessed 15th Sept 2024)

- Happi, C., Adetifa, I., Mbala, P., Njouom, R., Nakoune, E., Happi, A., ... & De Oliveira, T. (2022) Urgent need for a non-discriminatory and non-stigmatizing nomenclature for monkeypox virus. *PLoS Biology*, 20(8), e3001769. Urgent need for a non-discriminatory and non-stigmatizing nomenclature for monkeypox virus. *PLoS Biology*, 20(8), p.e3001769. [10.1371/journal.pbio.3001769](https://doi.org/10.1371/journal.pbio.3001769)
- Hazra, A., & Cherabie, J.N. (2023) Is mpox a Sexually Transmitted Infection? Why narrowing the scope of this disease may be harmful. *Clinical Infectious Diseases* 76, 1504–1507. <https://doi.org/10.1093/cid/ciac962>
- Hoppe, T. (2018) “Spanish Flu”: When infectious disease names blur origins and stigmatize those infected. *American Journal of Public Health*, 108, 1462–1464. [10.2105/AJPH.2018.304645](https://doi.org/10.2105/AJPH.2018.304645)
- Kumar, R., Khosla, R., & McCoy, D. (2024) Decolonising global health research: Shifting power for transformative change. *PLoS Global Public Health*, 4(4), e0003141. <https://doi.org/10.1371/journal.pgph.0003141>
- Kota, K.K., Hong, J., Zelaya, C., Riser, A.P., Rodriguez, A., Weller, D.L., ... Mermin, J. (2023) Racial and ethnic disparities in mpox cases and vaccination among adult males — United States, May–December 2022. *MMWR Morbidity & Mortality Weekly Report*, 72(15), 398–403. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7215a4.htm>
- Lancaster, K., & Rhodes, T. (2023) Problematising the emergence of outbreak science in the governance of global health: making time for slow dis-ease. *Critical Public Health*, 33 (5), 838–847. <https://doi.org/10.1080/09581596.2023.2232523>
- Panaitiu, I.G. (2020) Apes and anticitizens: simianization and U.S. national identity discourse. *Social Identities*, 26(1), 109–127. <https://doi.org/10.1080/13504630.2019.1679621>
- Smith, A.K.J., Storer, D., Lancaster, K., Haire, B., Newman, C.E., Papparini, S., ... Holt, M. (2024) Mpox illness narratives: Stigmatising care and recovery during and after an emergency outbreak. *Qualitative Health Research*. [10.1177/10497323241234482](https://doi.org/10.1177/10497323241234482)
- Thornhill, J. P., Barkati, S., Walmsley, S., Rockstroh, J., Antinori, A., Harrison, L. B., ... & Orkin, C. M. (2022) Monkeypox virus infection in humans across 16 countries—April–June 2022. *New England Journal of Medicine*, 387(8), 679-691. [10.1056/NEJMoa2207323](https://doi.org/10.1056/NEJMoa2207323)
- Wald, P. (2008) *Contagious: Cultures, carriers, and the outbreak narrative*. Duke University Press.
- WHO (2015) World Health Organization best practices for the naming of new human infectious diseases. <https://www.who.int/publications-detail-redirect/WHO-HSE-FOS-15.1> (Accessed 16th March 2024).
- WHO (2022) WHO recommends new name for monkeypox disease, 2022. <https://www.who.int/news/item/28-11-2022-who-recommends-new-name-for-monkeypox-disease> (Accessed 16<sup>th</sup> March 2024).
- WHO (2023) Mpox (monkeypox). URL <https://www.who.int/news-room/fact-sheets/detail/monkeypox> (Accessed 16<sup>th</sup> March 2024)
- WHO (2024) Mpox - Democratic Republic of the Congo. URL <https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON522#> (Accessed 12<sup>th</sup> Aug 2024).
- Yinka-Ogunleye, A., Aruna, O., Dalhat, M., Ogoina, D., McCollum, A., Disu, Y., ... & Satheshkumar, P. S. (2019) Outbreak of human monkeypox in Nigeria in 2017–18: a clinical and epidemiological report. *The*

*Lancet Infectious Diseases*, 19(8), 872-879. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(19\)30294-4/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(19)30294-4/fulltext)