Mpox vaccination strategies in DR Congo

Following the declaration of a public health emergency of international concern for the mpox epidemic in DR Congo, the global health community has invocated vaccine equity to justify huge health commodity investments as the preferred response. Alexandra Savinkina and colleagues,[1] primarily based in North America, used a dynamic and stratified model to simulate potential mpox vaccination strategies and conclude that, because resources are limited, vaccinating children (age ≤15 years) in endemic regions of DR Congo would be the most efficient use of vaccines. They estimate that, without vaccination, 14 700 cases and 700 deaths from mpox would occur over a year, and their two preferred scenarios involve vaccinating 80% of all children younger than 5 years or 80% of those aged 15 years or younger in endemic regions, leading to a 43% or 71% reduction in deaths, respectively, and requiring 10·5 million or 26·6 million vaccine doses, respectively.[1]

In DR Congo in 2021, 308 000 children died from all causes combined before the age of 5 years, and 55 000 died aged between 5 and 14 years.[2] Under scarcity, it is even more crucial to get the most value from the resources invested. That same year, the country's health expenditure was estimated at US$2·1 billion or $22·3 per capita. Domestic public health expenditure was estimated at $358·8 million and external health expenditure at $802·8 million.[3] With UNICEF recently paying $65 per mpox vaccine dose,[4] the estimated cost of Savinkina and colleagues' preferred scenarios for procurement alone ranges between $682·5 million (ie, roughly twice the yearly public health expenditure) and $1·7 billion (ie, over twice the total yearly amount of development assistance for health). The expected benefit is to prevent between 301 and 378 child deaths from mpox—that is, between $2·3 and $4·6 million per mpox death averted.

Mpox vaccination is obviously not cost-effective for DR Congo and poses significant opportunity costs. From a public health perspective, the invocation of the word equity must reflect a contextualised approach to improving health, rather than being more akin to its Cambridge Dictionary definition of corporate equity, namely, "the value of a company, divided into many equal parts owned by the shareholders, or one of the equal parts into which the value of a company is divided." The implication of Savinka and colleagues' conclusion is that the millions of dollars proposed for procuring vaccines will profit pharmaceutical shareholders rather than the people of DR Congo.[5]

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1 Savinkina A, Kindrachuk J, Bogoch II, et al. Modelling vaccination approaches for mpox containment and mitigation in the Democratic Republic of the Congo. *Lancet Glob Health* 2024; **12:** e1936–44.
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3 WHO. Global Health Expenditure Database. 2024. https://apps.who.int/nha/database/Home/Index/en (accessed Sept 4, 2024).
4 UNICEF. UNICEF signs mpox vaccine deal at lowest market price for 77 low- and lower-middle-income countries. Sept 26, 2024. https://www.unicef.org/press-releases/unicef-signs-mpox-vaccine-deal-lowest-market-price-77-low-and-lower-middle-income (accessed Oct 12, 2024).
5 Bell D, Paul E. Vaccine equity or health equity? *J Glob Health Econ Policy* 2022; **2:** e2022005.