



Expanding Access to Mpox Vaccines Through Affordable Transparent Pricing

On September 26, 2024, UNICEF announced that it had negotiated a price of up to \$65 per dose of Bavarian Nordic's mpox vaccine, MVA-BN.¹ The announcement followed an advance purchase agreement by Gavi, the Vaccine Alliance (Gavi).²

This price makes it one of UNICEF's most expensive vaccines. Bavarian Nordic has provided no evidence that the price it offered is fair.

To remedy its excessive pricing and better provide for health need, Bavarian Nordic should quadruple its vaccine supply order with UNICEF from one million doses to four million doses. This supply should be made available free of charge, cutting the effective per dose price to \$16.25 for the existing agreement. Additionally, the company must publicly justify its pricing and clarify its pricing strategy for low- and middle-income countries (LMICs) to ensure greater access and transparency.

Opaque, High Price

Despite calls from health groups to prioritize affordability and transparency, **Bavarian Nordic has yet to provide meaningful justification for its pricing, especially with respect to supply to hard-hit and low-resource countries.**³

Public Citizen's recent findings⁴ underscore the need for affordability and transparency:

- *Bavarian Nordic may charge the U.S. government up to \$10 less per dose to stockpile MVA-BN than it charges UNICEF and Gavi.* LMICs should not pay more for vaccines than rich countries. This disparity, coupled with Bavarian Nordic's secretive approach to pricing, raises serious questions about the fairness of the price offered to UNICEF. Bavarian Nordic must ensure that it offers the lowest possible price for LMICs.
- *Over \$2.3 billion in U.S. government investment undergirds MVA-BN.* Bavarian Nordic must ensure that this substantial public investment translates into broad and affordable access and public-facing transparency.
- *Manufacturers in LMICs sell vaccines using production processes similar to Bavarian Nordic's for less than \$5 per dose—a fraction of the price Bavarian Nordic charges for MVA-BN.* While cost structures between Bavarian Nordic and these manufacturers may not be directly comparable, the large disparity still warrants clarification. Noting the significant margin for possible cost structure—and absent evidence of production costs from Bavarian Nordic—it appears reasonable to expect that Bavarian Nordic can and should quadruple its supply to UNICEF, effectively cutting per dose price to \$16.25 under the existing agreement.

¹ <https://www.unicef.org/press-releases/unicef-signs-mpox-vaccine-deal-lowest-market-price-77-low-and-lower-middle-income>

² <https://www.gavi.org/news/media-room/gavi-signs-agreement-bavarian-nordic-rapidly-secure-500000-doses-mpox-vaccines>

³ <https://www.citizen.org/article/letter-urging-gavi-unicef-to-negotiate-fair-price-of-mpox-vaccines/>;
<https://www.citizen.org/article/letter-to-bavarian-nordic-urging-equitable-access-to-mpox-vaccine/>

⁴ <https://www.citizen.org/news/bavarian-nordic-charged-unicef-up-to-10-more-per-dose-of-mpox-vaccine-than-u-s/>

MVA-BN's Undue Expense

The MVA-BN mpox vaccine is currently UNICEF's second most expensive vaccine by price per dose, according to 2024 pricing data disclosed by UNICEF.⁵

- The median price per dose for vaccines UNICEF procures is \$2.50 (of the highest price listed for each vaccine, including mpox).
- Of the vaccines with prices listed for 2024, all but two, including MVA-BN, are priced under \$27 per dose.

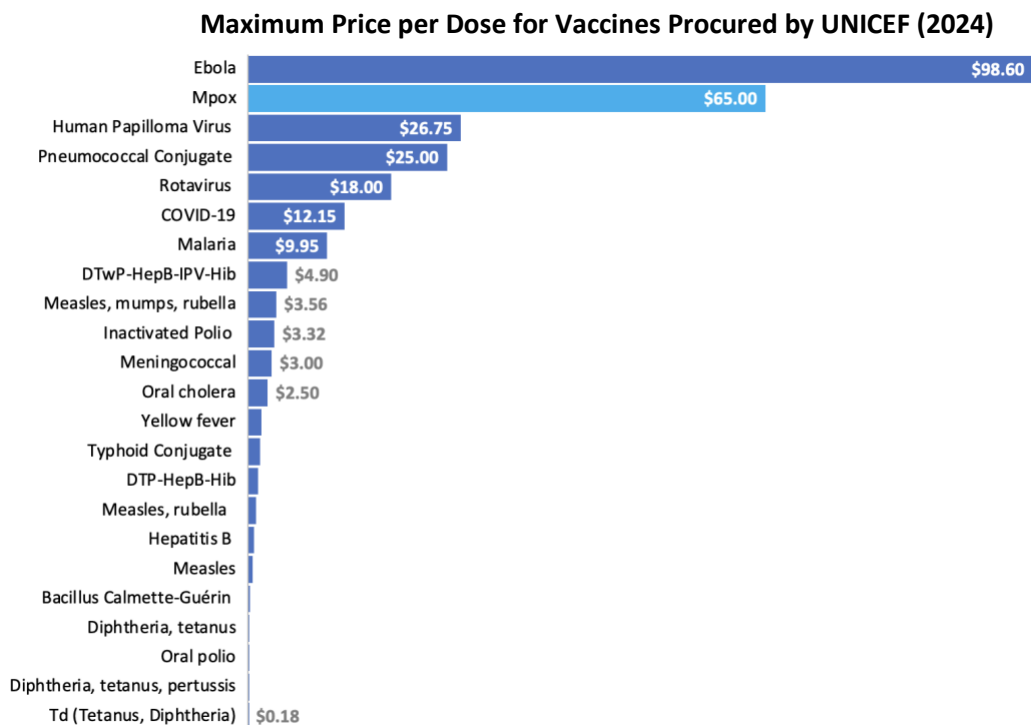


Chart: Public Citizen; Source: UNICEF vaccine pricing data for 2024.

The only vaccine with a higher per dose price than MVA-BN, the Ebola vaccine, was procured in much lower quantities in 2023 than the quantity of MVA-BN to be procured in 2024.⁶ While the Ebola vaccine is more expensive (\$98.60 per dose),⁷ the value of the 130,000 Ebola vaccines contracted for supply in 2023 was \$12.52 million⁸—substantially less than the current ceiling MVA-BN procurement value (\$65 million).⁹ Moreover, Bavarian Nordic's mpox vaccine has other, highly profitable markets in high-income countries that buy and replenish stockpiles for health security relating to both smallpox and mpox. This should give Bavarian Nordic flexibility to provide lower prices for LMICs.

UNICEF and Gavi's negotiation and resulting high price is concerningly similar to the Pan American Health Organization's 2022 effort to purchase MVA-BN through its procurement mechanism, the Revolving Fund. At the time, a PAHO representative noted that Bavarian Nordic refused to provide its lowest price and that the resulting price would be significantly higher than any other vaccine offered through the Revolving Fund.¹⁰ For context, the

⁵ <https://www.unicef.org/supply/vaccines-pricing-data>

⁶ <https://www.unicef.org/supply/pricing-data>

⁷ The price also includes a service component of managing, storing, maintaining and replenishing the Ebola vaccine stockpile. <https://www.unicef.org/supply/media/6956/file/Ebola-vaccines-prices-11012021.pdf>

⁸ <https://www.unicef.org/supply/pricing-data>

⁹ <https://www.unicef.org/press-releases/unicef-signs-mpox-vaccine-deal-lowest-market-price-77-low-and-lower-middle-income>

¹⁰ https://www.paho.org/sites/default/files/cdss2-fr-e-final-report_0.pdf, at 5.

highest price listed among the Revolving Fund’s disclosed prices is about \$21 per dose—indicating that MVA-BN was likely the most expensive vaccine by a very wide margin.¹¹

Access Pricing Still Needed

Bavarian Nordic has not clarified how the \$65 price was established. The lack of justification, along with the finding that the U.S. may pay less than UNICEF and Gavi, requires a swift remedy.

Bavarian Nordic should quadruple its supply order with UNICEF to compensate for its original excessive price. Bavarian Nordic should further adjust the price for future orders based on a verifiable cost-plus basis, with transparent justification. This approach should be adopted for all LMIC purchasers.

UNICEF and Gavi, as stewards of public funds, also have a responsibility to secure a fair price on clear, transparent terms. **Gavi and UNICEF should push Bavarian Nordic for more reasonable pricing and ensure the company provides complete, transparent information during price negotiations.** This will help ensure that public funds are spent responsibly and effectively.

Quadrupling the supply would have a significant impact—effectively saving \$195 million on the adjusted order. Any future orders placed at the new lower price would also save millions of dollars compared to costs at the original price. [Table 1]

Table 1. Prospective Savings for Future Orders

| Purchase Quantity (doses) | Savings with 1/4 Price (compared to \$65/dose) |
|---------------------------|--|
| 1 million | \$48.75 million |
| 2 million | \$97.5 million |
| 3 million | \$146.25 million |
| 4 million | \$195 million |
| 5 million | \$243.75 million |

In addition to conserving limited financial resources, increasing UNICEF’s order and lowering the price for future orders for all LMICs would help bolster supply to respond to health need. Considering two doses of MVA-BN are needed per person, quadrupling UNICEF’s order would provide enough doses to fully vaccinate two million people, compared to 500,000 under its current deal. Further, increasing supply would be more sustainable over time, even if the current outbreak is contained.

While need estimates will likely change as the response continues, the Africa CDC has set a target to vaccinate up to 10 million people against mpox. Separately, the WHO has estimated a need for up to four million vaccine doses over six months. As estimates develop, clear assurances of sufficient supply can help inform vaccination planning based on consideration of health need, not unnecessarily restricted supply.

Currently, enough vaccine doses to fully vaccinate just 1.4% of the Africa CDC’s target have been delivered. However, the Africa CDC recently noted that more doses are expected to become available in October and November.¹² Taken alongside previous deliveries, this additional supply would cumulatively account for enough

¹¹ <https://www.paho.org/en/documents/paho-revolving-fund-vaccine-prices-2023>

¹² <https://www.youtube.com/watch?v=vo3cjcVBo-4>, at 11:22 (showing that 898,000 doses MVA-BN are expected to be available in October and another 700,000 doses potentially becoming available in November. As MVA-BN is administered in two doses, these doses would be enough to fully vaccinate half as many people).

doses to fully vaccinate up to 9.4% of the Africa CDC’s target. Including delivered doses, total mpox vaccine purchases and donations so far account for about 45% of the Africa CDC’s target. [Table 2]

Table 2. Potential Supply Shortfall¹³

| Vaccine Supply Category | Number of Doses | Number of People Covered by Doses | Percent of 10M Person Target | Number of People Remaining to Reach 10M Target |
|--|--------------------------|-----------------------------------|------------------------------|--|
| Total Delivered (subset of pledged total), as of Oct. 25, 2024 | 280,880 ¹⁴ | 140,440 | 1.4% | 9,859,560 |
| Total Pledged | 5,891,960 ¹⁵ | 4,470,980 | 45% | 5,529,020 |
| Future Vaccine Donations & Purchases | ? | ? | ? | ? |
| Bavarian Nordic’s supply capacity, provided orders are placed (as of Sept. 12, 2024)* | 12,000,000 ¹⁶ | 6,000,000 | 60% | None ¹⁷ |

*Bavarian Nordic’s full supply capacity of twelve million doses may not be needed to make up the potential shortfall considering possible future donations from stockpiles or purchases of different mpox vaccines. However, it is notable that Bavarian Nordic has capacity—which UNICEF and other purchasers may be more compelled to utilize if the price were affordable.

We encourage Bavarian Nordic to continue its trials in child populations and to seek prompt regulatory approval for such use when positive findings are confirmed.

In the longer term, mpox vaccines should be available from a wider range of suppliers. Bavarian Nordic can support independent local production by sharing know-how, licensing its technologies, and working with manufacturers in LMICs, including in Africa. Bavarian Nordic should also ensure that doses of MVA-BN can be used for research purposes, including as a comparator against new mpox vaccine candidates that may be better and more cost-effective than MVA-BN.

Gavi and UNICEF must also support the Africa CDC in urging Bavarian Nordic and any other approved mpox vaccine manufacturers to license their vaccines and transfer technology to qualified producers, especially in Africa. Increasing self-sufficiency and lowering prices through multiple lower-cost manufacturers will not only impact mpox but also strengthen regional biopharmaceutical and vaccine manufacturing capacity more broadly. To that end, Gavi and UNICEF should support procurement from newly licensed and quality-assured manufacturers.

¹³ This table calculates the potential vaccine supply shortfall using the Africa CDC’s target to vaccinate 10 million people against mpox. Separately, the WHO has estimated that 4 million mpox vaccine doses are needed over the first six months of the outbreak, provided certain case numbers. <https://www.who.int/publications/m/item/mpox-global-strategic-preparedness-and-response-plan> (noting WHO dose estimate), <https://africacdc.org/download/mpox-continental-preparedness-and-response-plan-for-africa/> and <https://x.com/JeanKaseya2/status/1842905888035680351> (noting Africa CDC target to vaccinate around 10 million people).

¹⁴ <https://www.thinkglobalhealth.org/article/mpox-vaccine-tracker-millions-pledged-millions-still-be-delivered> (last visited October 25, 2024).

¹⁵ *Id.*; <https://www.unicef.org/press-releases/unicef-signs-mpox-vaccine-deal-lowest-market-price-77-low-and-lower-middle-income>

¹⁶ One million in 2024, 11 million by the end of 2025. This total excludes the one million doses recently contracted with UNICEF. <https://www.bavarian-nordic.com/investor/news/news.aspx?news=6989>

¹⁷ Assumes all pledges are delivered and administered.