

Safeguarding in-country mOPV2 stocks during COVID-19 pandemic pause

The COVID-19 pandemic poses an extraordinary public health emergency of international concern. The response to this disease requires worldwide solidarity and an urgent global effort. As a first step, Polio Oversight Board (POB) of GPEI recommended all polio activities which come in contradiction to global guidance on physical distancing to be suspended to avoid placing communities and frontline workers at unnecessary risk. As a result, all countries planning to conduct outbreak response campaigns (mOPV2, bOPV), are requested to postpone them until June 1, 2020. This period might be longer, depending on the challenges set by the pandemic.

Although the shelf life of mOPV2 is long enough to cover the campaign break period, expiration date printed on the labels are only valid when mOPV2 is kept at temperatures below -20°C. If stocked at refrigerators (+4°C), mOPV2 shelf life is indicated by the status of VVM and would be around 6 months.

Therefore, during the campaign break period, GPEI suggests containing all in-country mOPV2 vials at a designated high-level cold store with a negative (-25°C to -15°C) temperature storage facility, following a detailed physical inventory. This relocation activity intends to prevent accidental usage of the vaccine and possible damages due to poor temperature and stock management practices at multiple peripheral stores and health facilities.

Activities to be conducted:

1. Conduct a thorough physical inventory of mOPV2 stocks in their current storage places. Ensure that the below information is collected and reported (this Excel sheet can be used for standard data collection: <https://tinyurl.com/seyltr6>)
2. Calculate total volume requirement based on the quantity of mOPV2 doses. Packed volume of one dose of mOPV2 is about 0.5 cubic centimeter. 1000 doses of mOPV2, regardless of its manufacturer, occupy 0.5 liter in cold chain if stored in original secondary packages.
3. Select a high-level (central or zonal) cold store that can provide the calculated freezer volume to keep all mOPV2 stock. Stores may keep the mOPV2 vials either in part of a walk-in freezer room or in multiple vaccine freezers. Equipment used to store mOPV2 should be marked clearly and secured (Figure 1).



Figure 1. mOPV2 labeled and contained at central store freezer room shelves and in designated vaccine freezers.

- mOPV2 vials should be transported in WHO prequalified long range cold boxes. If prequalified cold boxes are not available, original international shipping cartons can be used for short distances (Figure 2). Only solidly frozen icepacks should be used. Stores should avoid using cooler packs filled with phase changing material (PCM) as these might be designed to melt at positive temperatures, thus may not keep the vaccine cold enough for long transports.



Figure 2. mOPV2 vials should be transported in WHO prequalified long range cold boxes. If prequalified cold boxes are not available, original international shipping cartons can be used for short distances.

- Temperature monitoring and management must always be maintained during the storage of the mOPV2 stock. Stores should utilize remote temperature monitoring (RTM) systems if available. These devices can provide SMS/email messages if inner temperatures are higher than the set alarm thresholds. Store staff should check and record status of VVMs on randomly selected vials. Number of vials with VVMs reached to discard point should be reported during physical inventory (Figure 3).



Figure 3. Web-enabled wireless remote temperature monitoring systems help continuous temperature management. However, VVMs should be controlled periodically and number of vials with VVMs reached to discard point should be reported during physical inventory and disposed of as described in the mOPV2 management guidelines.

- Stores used for long-term mOPV2 storage should have alternative power sources like an auto-start standby generator, uninterrupted power supply or a secondary power grid connection (Figure 4).



Figure 4. Backup power sources like standby generators should be maintained and tested regularly. There should be enough petrol to cover longest experienced power cut. Power cords of vaccine freezers should be fixed to prevent accidental unplugging.

7. All inventory, transport and related activities should be conducted in line with the local physical distancing and personal protection measures for Covid-19 as issued by the governments.
8. Physical inventory and VVM status check of the mOPV2 stock should be repeated monthly, and reported to relevant UNICEF ROs and the HQ (ktonde@unicef.org, aafsar@unicef.org).