



# QUANTIFICATION

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## Task

Estimate the quantities and costs of product needed for LPV/r pellet rollout and determine when the products should be ordered and delivered to ensure an uninterrupted supply for the program.

## Overview

Successful product rollout requires having sufficient product and getting it to health care workers in accordance with the rollout plan. Quantification is the process of ensuring adequate product supply by: estimating the quantities and costs of the products required for a specific health program (or service) and determining when the products should be delivered to ensure an uninterrupted supply for the program.

## Recommendations for LPV/r Pellet Quantification

- Quantification should take place according to, and aligned with, the previously agreed-upon [LPV/r pellet rollout strategy](#) . The process should take into account the patients targeted, timing of regional rollout, and the effects of scale-up rates on other factors such as training of health care workers. This means that a quantification exercise should only take place once the rollout strategy and treatment guidelines are well defined, officially sanctioned, and disseminated among partners. Any quantification will be inaccurate if it makes incorrect assumptions about aspects of the rollout strategy, such as [eligibility requirements](#), for example.
- It may be possible to apply multiple forecasting methodologies and compare the results to produce a single figure to use for the quantification. Conventional best practice methodologies include developing forecasts using demographic/morbidity data, service statistics, service capacity, and historical logistics data. The ability to apply these methodologies requires these types of data to be available. Please see the [Quantification Guide](#) [PDF, 4.0MB], also listed among the [Additional Resources](#) below, for more information on these approaches.
- [Evaluate individual forecasts](#) to determine whether they are technically and methodologically sound. Any forecast that is not should be discarded. The remaining forecasts should then be compared and reconciled to produce the best consumption estimate.
- A particular challenge with forecasting new products may be a lack of historical service statistics. To the extent possible, apply assumptions about the anticipated formulation

breakdown to the historical data (consumption and service provision) for existing LPV/r formulations.

- If necessary, draw assumptions from the existing implementation strategy and timeline documents. However, for procurement it is recommended to apply assumptions that represent realistic rollout capacities. These should include:
  - Storage capacity at warehouses.
  - Expected consumption rate at each service delivery point (how often the pellets will be issued to patients).
  - Length of time it will take from the pellets to travel through the supply chain from the central level to the service delivery point.
- If possible, include other [pediatric antiretroviral \(ARV\) commodities](#) in the LPV/r pellet quantification exercise, since prescription uptake of LPV/r pellets will affect anticipated consumption of other formulations such as LPV/r solution and ABC/3TC. The quantification exercise will serve as an opportunity for policy-makers and experienced staff to discuss assumptions in these areas. As LPV/r pellets roll-out moves ahead, countries should keep track of the “draw-down,” or phase-out, of the other ARVs that the pellets may replace. It is critical to determine if there will be extra stock left over after the LPV/r pellets transition, and if 1) the transition should be adjusted to ensure increased consumption of the ARVs that LPV/r pellets will replace, to minimize excess stock; or 2) if there is a quantity of excess stock that is deemed acceptable after the transition. Note that, for option 2, the country must be prepared to have comprehensive, functioning processes and infrastructure in place to dispose of the excess ARVs. Option 1 is almost always preferable.
- Do **not** use LPV/r solution consumption as a direct proxy for LPV/r pellets consumption, unless stakeholders are confident that treatment guidelines will always be followed.
- Make sure that patient age and weight data are accurate down to the facility level before basing a forecast off of facility-level records. Consider contacting a sample of facilities for their patient record data.
- Despite increased production of pellets/granules in 2019, and given past experiences with LPV/r oral pellets, there is a clear need for more intensive intervention and coordination to ensure paediatric LPV/r formulations, particularly LPV/r oral pellets and oral granules, are rationally procured, distributed, and utilized to reach populations most in need. An inter-agency team of major donors, procurers, and implementing agencies is available to provide guidance, support, and coordination in a way that is responsive to the needs of both the market and end users. This level of coordination will require open collaboration and transparency across all stakeholders in order to reach maximum impact. Countries are **STRONGLY** discouraged from stockpiling LPV/r oral pellets or oral granules and instead advised to plan for more frequent, staggered, and small deliveries of orders for LPV/r pellets and/or granules to better match procurement with consumption. This mitigates the risk of wastage if scale-up plans occur more slowly than anticipated. USAID’s RDCs will maintain buffer stocks of LPV/r oral granules to increase supply security. Country orders placed to the RDCs will decrease lead times to one to two months and enable more frequent deliveries as we study the rate of consumption. For more information read the ARV Procurement Working

Group memo on [coordinating supply and supporting scale up of paediatric LPV/r formulations](#) [PDF, 344KB].

- When developing the supply plan, check with the [ARV Procurement Working Group](#) to obtain global lead times for pellets sourcing; and continue to procure “old” formulations as necessary to avoid a gap in LPV/r availability.
- When developing the supply plan, also account for in-country lead times for distributing commodities from the central store to the service delivery point, to estimate stock transition timing from old formulations to the new.
- After the quantification is completed, countries are encouraged to complete at least four quarterly “supply plan” reviews of the initial quantification. During the reviews, countries should compare the forecasted consumption rate for LPV/r pellets versus the actual consumption rate, and determine the current stock on hand. Countries should use these reviews to adjust future orders (quantity increase or decrease) to ensure that appropriate amount of LPV/r pellets are being ordered and prevent stockouts or overstock. Less frequent supply plan reviews of the quantification increase the risk of a country having LPV/r pellet stock levels above or below the levels of patient demand.

## Tools

- [Paediatric ARV 3-Year Forecasting Tool](#): Excel-based forecasting tool focusing on all paediatric ARV regimens within a national program. This tool is not LPV/r pellet-specific. It is a morbidity-based forecasting tool that quantifies ARV needs over a three-year period for an HIV/AIDS treatment program. Outputs for this tool include: 1) demand for each formulation over the next 36 months, taking into account current stock and timing and 2) total procurement cost.

## Additional Resources

- [Supply Planning for New Dosage Form of Lopinavir and Ritonavir Oral Pellets Policy Brief](#): [PDF, 843KB] Policy brief by the World Health Organization, Interagency Task Team, and United Nations Children's Fund listing important program design considerations and assumptions for the development for LPV/r pellet rollout as related to forecasting and supply planning.
- [Quantification Guide](#): [PDF, 4.0MB] A comprehensive guide to quantification of health commodities, intended for program managers and other public health supply chain partners. Includes detailed instructions for forecasting consumption for antiretroviral drugs. Also available in [French](#) [PDF, 839KB].

- [Pipeline Software](#): [ZIP, 286MB] A downloadable software that supports supply planning and pipeline monitoring. Available in Arabic, English, French, Portuguese, Spanish, and Vietnamese.
- [Quantification of Health Commodities: ARV Companion Guide: Forecasting ARV Drugs Using the Morbidity Method](#): The primary focus and purpose of the ARV companion guide is to describe the process and the methods used for forecasting ARV drug needs.
- [Quantimed](#): This resource facilitates calculation of commodity needs using either a single method or a combination of any of the three primary quantification methods: past consumption, morbidity patterns, and proxy consumption.