



CASE EXAMPLES

Below are case examples of specific situations you may encounter and questions to check your understanding of LPV/r formulations and dosages that should be prescribed as well as potential issues you may encounter.

Case Example 1

Joseph is a 2-year-old boy who was hospitalized for malnutrition 2 months ago. He is in the process of recovering and is now able to take age-appropriate soft porridge. While he was hospitalized, it was discovered that Joseph's mother was diagnosed with HIV 4 years ago but fell out of care soon after her diagnosis. She has never initiated antiretroviral therapy (ART) and has never participated in services to prevent mother-to-child transmission while she was pregnant or breastfeeding. Joseph was tested for HIV while he was in the hospital and his HIV test came back positive.

- Weight: 7 kilograms
- CD4: 245/10%
- Viral load: 55,000 copies/mL

Joseph is ready to initiate ART and Joseph's mother has said he may begin treatment.

What regimen would you select?

ABC + 3TC + LPV/r

What LPV/r formulation would you select?

LPV/r pellets

What LPV/r dosage would you select?

Pellets from 3 capsules in the morning and 3 capsules in the evening. Check the [Weight Dosing Tool](#) for specific dosages for other weights.

When providing education to Joseph's mother, what additional information should you provide?

In addition to providing administration instructions, you should consider watching Joseph's mother administer his dose to him to make sure that he is taking them correctly and to answer

any questions that his mother may have. You should also provide Joseph's mother with the following information:

- Capsules must be opened to administer pellets. Capsules should NOT be swallowed whole.
- Pellets should be swallowed whole. They should NOT be broken, crushed, chewed, or allowed to dissolve. Doing so may reduce the amount of medication your child receives.
- Choose an age-appropriate soft food that does not require chewing to minimize the chances of the child chewing or crushing the pellets.
- Once the pellets have been added to the age-appropriate soft food, administer them immediately. Do not store the soft food mixed with pellets for a later time.
- Ensure that no pellets remain in the mouth, because they will develop an unpleasant taste after about a minute of being held in the mouth. Provide additional age-appropriate soft food or a beverage to the child to ensure that no pellets are retained in the mouth.
- If your child misses a dose of LPV/r pellets, give the dose as soon as possible; but if it is more than 6 hours later, skip the missed dose and just give the next dose at the regular time. Do not give two doses at the same time to make up for a missed dose. If you are unsure whether or not to administer the dose, call your health care worker.
- Notify your health care provider if you notice your child has a decreased appetite, light-colored stool, dark-colored urine, or a rash; feels very hot, appears to have stomach pain, or faints.

When should you see Joseph again? -

Per World Health Organization Guidelines, you should follow up with Joseph in 2 weeks.

What information should you gather regarding LPV/r pellets at the next appointment? -

- The caregiver's attitudes and concerns about use of LPV/r pellets.
- How LPV/r pellets are prepared prior to administration (e.g., mixed into food, etc.)
- Side effects such as: the child is eating less; has yellow colored skin or eyes, light-colored stool, dark-colored urine, or itchy skin; appears to have stomach pain, is repeatedly vomiting, or faints.
- Adherence.

Case Example 2

Myriam is 4 years old and currently on 2nd line ART. She was initiated on AZT/3TC/NVP at age 18 months with a baseline CD4 60/3%, viral load was 110,000 copies/mL, and a weight of 4 kilograms. At age 3 her CD4 was 100/6%, and weight was 8 kilograms. At that time she was

hospitalized for severe pneumonia. During her hospitalization she was switched to ABC/3TC + LPV/r solution due to presumed clinical treatment failure (viral load testing was not available at the time). Now at 4 years old, her CD4 is 350/17%, viral load is 17,000 copies/mL, and her weight is 12 kilograms. Her mother reports that Myriam frequently vomits after taking her medications and dislikes the taste of LPV/r solution.

Should Myriam be switched to LPV/r pellets?

It depends. Myriam's weight of 12 kilograms and her age indicate that she may be able to swallow intact tablets. At future follow-up visits, her ability to swallow a fully intact pediatric LPV/r tablet (100 mg/25mg) should be reassessed. If Myriam is able to swallow whole tablets, then the pediatric LPV/r tablet (100mg/25mg) should be considered. If she is unable to swallow whole tablets, then LPV/r pellets should be prescribed in place of the solution.

If LPV/r pellets are prescribed, what dosage should be given?

With a weight of 12 kilograms, Myriam should take pellets from 4 capsules in the morning and 4 capsules in the evening. Check the [Weight Dosing Tool](#) for specific dosages for other weights. If Myriam is prescribed pellets, her swallowing ability should be reassessed at future visits to determine when she can switch to whole tablets.

Myriam's mother calls 5 days later to say that she forgot to give Myriam her morning pellets. It is 10 hours later. What should you tell her?

Tell Myriam's mother to not administer this morning's dose and to continue as scheduled with the evening dose. Remind her mother that if Myriam misses a dose of LPV/r pellets, she should give the dose as soon as possible; but if it is more than 6 hours later, she should skip the missed dose and just give the next dose at the regular time. You should also provide her with adherence education and discuss tips to help remind her to give Myriam each dose, including using a cell phone alarm clock, giving the doses approximately 12 hours apart, such as at breakfast and dinner time, and, having another family member assist with reminders.

Case Example 3

Sara is a 22-month-old girl who was diagnosed with HIV at age 9 months. Her baseline CD4 was 450/25%, viral load was 225,000 copies/mL, and weight was 7 kilograms. She was initiated on AZT/3TC/NVP shortly after diagnosis. Her most recent CD4 was 650/25%, viral load was undetectable, and weight was 11kg.

With an undetectable viral load, should you switch her to LPV/r pellets?

No, she is responding well to treatment. Unless the national guidelines provide alternative guidance, keep her on her current regimen and continue to monitor her.

If her viral load was 6,000 cop/mL, should you switch her to LPV/r pellets?

Not yet. The next step is to evaluate Sara for treatment failure by providing intensive adherence counseling and psychosocial support to her caregivers and by obtaining another viral load test (follow national guidelines; many countries recommend repeating a viral load test after 3 months).

Should Sara be switched to LPV/r pellets if her next viral load is 8,000 cop/mL?

Yes, if recommended by national guidelines. Given Sara's weight of 7 kilograms and age of 9 months, she is a good candidate for LPV/r pellets if she is able to swallow liquids or age-appropriate soft foods.

What dose of LPV/r pellets should Sara be prescribed?

Sara should be prescribed pellets from 4 capsules in the morning and 4 capsules in the evening. Check the [Weight Dosing Tool](#) for specific dosages for other weights.

Case Example 4

Ivan is 2.5 months old. He has completed 6 weeks of NVP prophylaxis and his first HIV PCR is positive. His mother is on ART and is exclusively breastfeeding him. His current weight is 4.5 kilograms.

Should you wait to begin ART until you have received the confirmatory PCR?

No! It is important for Ivan to begin ART immediately. He can begin ART while you are waiting for the results of the confirmatory PCR. The confirmatory dried blood spot (DBS) can be sent the same day he initiates ART. Follow national Early Infant Diagnosis guidelines.

What regimen should you prescribe Ivan?

ABC + 3TC + LPV/r

Which LPV/r formulation should you prescribe Ivan?

Ivan should be prescribed LPV/r solution. His weight of 4.5 kilograms is lower than the 5-kilogram minimum recommended for LPV/r pellets. Also, he is under 3 months old and developmentally he may not yet be able to swallow the pellets.

Ivan's mother brings him back one month later complaining that he often refuses to take the LPV/r solution. His weight is 5.5 kilograms. Should you consider a formulation switch?

Yes! Ivan is now old enough and meets the weight criteria to use LPV/r pellets. An assessment should be made to ensure that Ivan is able to swallow the pellets with breast milk or formula before switching to LPV/r pellets.

What dosage should be prescribed?

Ivan should be prescribed pellets from 2 capsules each morning and evening. Check the Weight Dosing Tool for specific dosages for other weights.