



Only **57%**
of children with
HIV are receiving
life-saving treatment



89%
of children with HIV
live in sub-Saharan
Africa



180,000
People die
every year from HIV-
related cryptococcal
meningitis

HIV

Ensuring access to optimal treatment for children and people with advanced HIV disease

Millions of people living with HIV now have access to antiretroviral treatment, allowing them to live long and healthy lives. But gaps in pharmaceutical R&D and equitable treatment access continue to leave children and people with advanced HIV disease behind. Treatment innovation for children with HIV has historically lagged far behind adults, and people with advanced HIV disease are extremely vulnerable to opportunistic infections including cryptococcal meningitis, a life-threatening fungal infection and leading cause of death in people with advanced HIV.

The push for progress

Until recently, antiretroviral treatment for children was complex and difficult for caregivers to administer – including syrups that required refrigeration and tasted bitter. Together with our partners, we developed an **easy-to-administer fixed-dose formulation of four drugs recommended for children with HIV**. The '4-in-1' combination treatment comes in strawberry-flavoured granules that are palatable and can easily be sprinkled on water, milk, or food, radically simplifying treatment administration for mothers and caregivers.

Our teams are also working to develop **better formulations of existing treatments for cryptococcal meningitis**, while improving access to available medicines.

Our goal is now to make sure optimal antiretroviral treatment is available to all children who need it, while ensuring access to safe, affordable, well-adapted, and effective treatment for cryptococcal meningitis. We will explore how we can work with partners to unblock market failures and address gaps in pharmaceutical R&D to ensure all people living with HIV have access to the right treatment at the right time, wherever they live.

Meeting the need for child-friendly medicines

In 2022, our teams and partners celebrated **South Africa's leading role as the first country globally to grant regulatory approval for Cipla's 4-in-1, followed by approvals in Mali, Uganda, and Kenya in early 2023**. In December 2022, the 4-in-1 was granted temporary use approval from regulatory authorities in the Democratic Republic of the Congo (DRC) to begin a project to expand testing and treatment with optimal paediatric antiretroviral formulations in remote parts of North-Ubangi and South-Ubangi where HIV treatment services did not previously exist.

“ I feel absolutely like any other person now. I don't have any fear of getting sick or dying at this point. Having treatment gave me my life back. I am now able to do normal, daily things. I'm so grateful for that.

Zikhona, from New Crossroads, Cape Town, South Africa, was in excruciating pain when she was diagnosed with cryptococcal meningitis. She was treated with flucytosine, amphotericin B, and lumbar punctures to relieve the pressure on her brain. It took some time for her headaches to go away. When they did, she was ecstatic that the medication was working.



Ensuring access to life-saving treatment for people with advanced HIV disease

Over 70% of people who develop cryptococcal meningitis can survive if they receive early and optimal treatment; but left undiagnosed and untreated, the disease is usually fatal. In May 2022, WHO recommended immediate-release flucytosine, fluconazole, and single-dose high-dose liposomal amphotericin B (LAmB) as first-line treatment for the devastating infection. Several countries have adopted the guidelines, but few have access to the medicines needed to provide the treatment in hospitals.

Working with key partners Clinton Health Access Initiative (CHAI), Unitaid, and St George's, University of London, DNDi co-convoked a **multi-country meeting on access to therapeutics and diagnostics for advanced HIV disease** in December 2022 to work towards overcoming barriers limiting access to life-saving treatment. Attended by representatives from ministries of health, expert clinicians, supply chain specialists, civil society, patient representatives, and donors, participants shared best practices and explored opportunities to address barriers to treatment in 13 countries with a high disease burden. DNDi also worked with Unitaid and CHAI to launch a request for proposals to produce generic LAmB, with the aim of bringing at least one affordable, quality-assured generic product to market in 2023/2024.

Working towards simpler, safer treatments for cryptococcal meningitis

Standard formulations of flucytosine – delivered in four doses per day – are poorly adapted for use in under-staffed and overburdened hospitals in resource-constrained settings. For critically ill patients, the drug often needs to be crushed and given by nasogastric tube. DNDi began developing a **sustained-release formulation of flucytosine** in 2020 together with our partner Mylan Laboratories Limited, India (a Viatris Company). Aiming to deliver a simpler, easier-to-administer formulation of the drug that is affordable and accessible to more people, the project is also strengthening existing local capacities in conducting clinical trials. The **first Phase I trial** kicked off at FARMOVS in Bloemfontein, South Africa in early 2022 and enabled the selection of a sustained-release prototype formulation for further development and testing. The **second Phase I trial** began at FARMOVS in November 2022 and was completed in January 2023, alongside Phase II trial preparatory activities with partners from the National Institute for Medical Research, Tanzania, and the University of North Carolina Project, Lilongwe, Malawi.

Learn more: dndi.org/paediatric-hiv
dndi.org/cryptococcal-meningitis