

Paediatric HIV



“
I faced a lot of difficulties with the medicine. I really had to battle in order for my baby to take them. It's heart-breaking to give a child four medicines at a time

Sani

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Sani, with her one-year old daughter Mel who is co-infected with HIV and TB, South Africa

Sani and her husband Brian knew they were going to have a child that was going to be HIV-positive. In addition to living with HIV, their baby Mel had also contracted tuberculosis (TB) and required multiple medicines.

While Sani and her husband Brian were able to obtain treatment for Mel, the available HIV therapy for infants was a foul-tasting lopinavir/ritonavir solution containing 40% alcohol and requiring refrigeration.

One of their biggest challenges was administering the medicine every day.

Despite major efforts to increase the number of children on HIV treatment and a continuing reduction in mother-to-child transmission of HIV, many of the two million children living with HIV are still being left behind. In 2016, only 43% of children living with HIV received antiretroviral therapy. While this is an important increase from 15% in 2009, it remains an unacceptably low level of treatment access for a vulnerable population.

One major challenge that contributes to this treatment gap is the suboptimal paediatric formulations available today. These formulations have not been designed with children's needs in mind: the only available version of lopinavir/ritonavir (LPV/r) is a bitter-tasting syrup that requires refrigeration and contains 40%

alcohol. Children struggle to take the medicine, often spitting or vomiting it back up, while caretakers in many sub-Saharan countries are forced to store the treatments buried in sand to keep them cool.

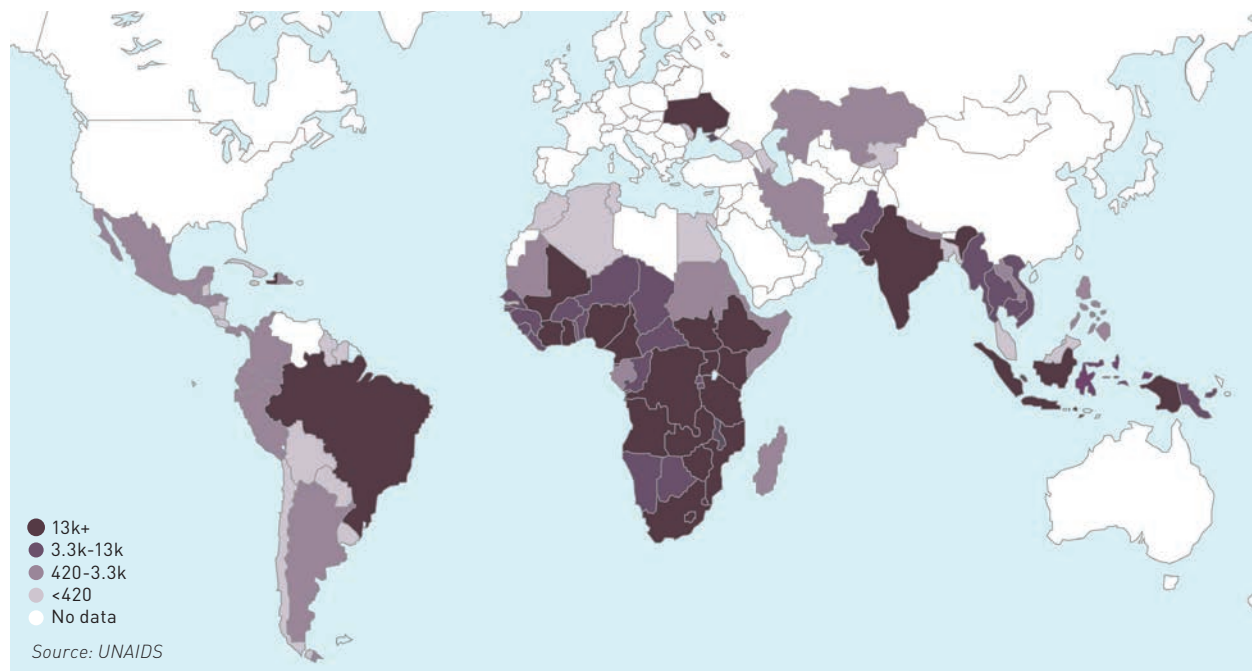
An improved first-line therapy for children under three years of age would be safe, easy to administer, well-tolerated and palatable, heat-stable, readily dispersible, and dosed once daily or less.

It is also important for any paediatric HIV treatment to be compatible with TB treatment, because children living with HIV are often co-infected with TB. In 2016, based on the interim results of a DNDi-sponsored study, WHO revised its guidelines to recommend 'superboosting' of ritonavir in HIV/TB coinfecting children.

THE DISEASE

- 90% of infected infants acquire HIV from their mothers, during pregnancy, delivery, or through breast-feeding
- Effective treatments can prevent HIV transmission from a mother to her child, but not all HIV-infected pregnant women have access to these treatments
- Without treatment, 1 in 3 children die in their first year of life; and half before they reach their second birthday
- Only 43% of children (<15 years) living with HIV are on antiretroviral medication
- Opportunistic infections such as tuberculosis are common

Children (<15 years) estimated to be living with HIV in 2016



1.8

MILLION

children living with HIV in 2016

OVER
300

HIV-related child deaths every day

180,000

children newly infected with HIV in 2017

94%

in sub-Saharan Africa in 2017

DNDi aims to:

- Develop an improved, first-line, child-friendly “4-in-1” therapy for infants and young children—a lopinavir/ritonavir-based, fixed-dose formulation in combination with two nucleoside reverse transcriptase inhibitors
- Introduce lopinavir/ritonavir pellets until better-adapted 4-in-1 products are available