How many children have HIV today, and how many are actually diagnosed and treated?

An estimated 2.6 million children currently live with HIV. But only about 32% of those in need of treatment receive it, compared with 40% of HIV positive adults.

Why are there so many infants and children that are not diagnosed and treated?

The majority of babies born with HIV are still not diagnosed and treated because of limited access to HIV testing for pregnant women and failure to keep HIV-positive mothers and babies in antenatal, post-natal, and HIV care. Also, current rapid tests used for adults do not detect HIV in infants and very young children.

So what are the problems with diagnostic tests for infants and young children?

Infants and young babies have HIV antibodies from their mothers, and this prevents the use of a simple rapid diagnostic test to determine their status. A more advanced laboratory test is needed, but this is not easy to do in resource-limited settings. Most advanced labs are mostly found in big capital cities, and require highly trained personnel, in addition to having to have good logistics to transport samples. On top of that, the time to get results is generally very long and the babies and infants can be lost from the clinic because of this.

Is there currently any better, more rapid diagnostic test out there for infants and children?

Simple, point-of-care early infant diagnosis (EID) tests that can be used rapidly to diagnose HIV in young babies in health care centers or testing in the community are currently being developed and some may soon be made available.

What happens to those that are not treated?

Without treatment, more than half of HIV-positive children will die before they turn two, and 4 out of 5 will die before the age of five. It is urgent to diagnose and treat children, but there are many challenges to overcome in order to scale up treatment.

What has changed recently in the World Health Organisation Guidelines for children with HIV and what does it mean in practice?

Before 2013, WHO recommended starting treatment on all children under two years old diagnosed with HIV. Now all HIV positive children under 5 years old should be treated – regardless of their CD4. This means more kids need to be treated. Some such as Kenya and Uganda countries are implementing treatment for all children below 15 years old.
**Why this change in ‘when to start’ treatment for children?**

Children who are not yet eligible for antiretroviral treatment (ART) are often not brought back to the clinic for their HIV care and treatment. Providing ART to children with known HIV status earlier can keep them in care. Taking this into consideration, many countries were already introducing immediate ART for children less than five years old.

In short, the WHO changed the recommendation because when caregivers and healthcare workers had to follow children and wait until the CD4 percentage was low enough to start treatment, many kids were lost to follow up.

**What kind of treatment should they be on? What are the changes?**

The big change is that younger kids – meaning those under three years of age – should be treated with an ART combination that includes a powerful class of antiretrovirals (ARVs) called protease inhibitors, or ‘PIs’ regardless of CD4 count and whether or not they have been exposed to ARVs through prevention of mother-to-child transmission (PMTCT).

**Why is this class of ARVs, called PIs, so important for infants and young children?**

Babies born with HIV have high viral load (more than a million copies are very common in children) and many are exposed to ARVs during PMTCT. This calls for a strong class of ARV called the protease inhibitor to be used.

**What treatments are available today, and what treatments or formulations need to be developed?**

For children under three years of age, who need a ‘PI’-based ARV regimen, the currently available formulations are there but have serious drawbacks, because they:
- taste horrible
- contain alcohol
- require refrigeration, are difficult to store and transport
- are not in fixed-dose combinations that put all drugs in one
- interact negatively with tuberculosis drugs.

For children from 3 to 10 years of age, the preferred ARV regimen (ABC/3TC/EFV) is not available in a fixed-dose combination (all drugs combined in one pill).

DNDi is working with Cipla (pharmaceutical company) to develop a fixed dose combination of ARVs for children; lopinavir/ritonavir (LPV/r). The new formulation for infants and young children will be in solid granules that fit into a capsule. Caregivers will be able to open the capsules and give the granules to children with soft food or breast milk. Unlike current liquid formulations, the capsules will not require refrigeration, will be “taste-masked” to do away with the terrible taste, and will be easy to dose across various weights.