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## 90-90-90 targets for HIV-positive children

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Accessing antiretroviral therapy (ART) is a matter of life and death for HIV-infected children. Without ART, half of children born with HIV die by the age of two years, and 80 percent die by the age of five years.<sup>i</sup> Globally, 2.6 million children younger than 15 years of age are living with HIV, yet only 32% are accessing ART.<sup>ii</sup>

To drive global and national level action on pediatric HIV treatment, the Joint United Nations Programme on HIV/AIDS (UNAIDS) – in collaboration with the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), and other partners – has outlined new treatment targets specifically for children that are designed not only to encourage increased HIV diagnosis and initiation of pediatric ART, but also to address challenges around adherence and retention that affect long-term health outcomes as children move from infancy, through childhood and adolescence, and into adulthood.

**The “90-90-90” targets aim to have 90% of all children living with HIV diagnosed, 90% of those diagnosed HIV-positive receiving treatment, and 90% of those children receiving treatment achieving viral suppression by 2020.**

<sup>i</sup> UNAIDS. How AIDS Changed Everything. [http://www.unaids.org/sites/default/files/media\\_asset/MDG6Report\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/MDG6Report_en.pdf). Published July 2015.

<sup>ii</sup> Ibid.



**Elizabeth Glaser  
Pediatric AIDS  
Foundation**

*Until no  
child has  
AIDS.*

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# A child's experience getting to 90-90-90

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90

By 2020,  
90% of all  
children living  
with HIV are  
diagnosed

HIV risk  
identified

Taken for test  
by caretaker

Gets  
blood drawn

Caretaker  
learns  
test results

90

By 2020,  
90% of all  
children  
diagnosed  
HIV-positive  
are receiving  
treatment

Gets referred  
for care

Goes to clinic  
for care

Caretaker learns  
how to manage  
HIV in child

Receives and  
starts ART

90

By 2020,  
90% of all  
children receiving  
treatment are  
achieving viral  
load suppression

Takes ART  
as prescribed

**REPEATS  
FOR LIFE**

Returns to clinic  
regularly for:  
- Adherence  
support  
- Clinic/lab  
evaluation  
- Medication  
refills  
- Other health  
care services

When  
appropriate,  
learns about  
HIV-positive  
status; begins  
managing  
own care

Transitions to  
adult care

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## Implications of each “90” goal for children living with HIV

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Despite the scale-up of global efforts for prevention of mother-to-child transmission (PMTCT) of HIV and the overall decrease in the number of children newly infected, globally 2.6 million children were living with HIV in 2014, and 600 children continue to be infected every day.<sup>iii</sup> In addition to scaling up existing PMTCT activities, programmatic shifts are needed in order to address the many challenges faced in reaching children infected and affected by HIV/AIDS with improved treatment access.

<sup>iii</sup> UNAIDS. How AIDS Changed Everything. [http://www.unaids.org/sites/default/files/media\\_asset/MDG6Report\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/MDG6Report_en.pdf). Published July 2015.

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90% of  
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## CHALLENGES

Unknown HIV status in parents means unknown risk of HIV transmission to children

Incomplete uptake of PMTCT services means some children do not receive essential prevention services

Low uptake of antenatal and postnatal care services means that children of HIV-positive adults may remain unidentified

Challenges with retention in adult ART services increases risk for transmission to children of HIV-positive parents

Stigma prevents caretakers from having children tested for HIV

Given continued risk of HIV transmission throughout the breastfeeding period, repeat testing of mothers and children is needed to confirm final HIV diagnosis after risk period is over

Presence of HIV antibodies from HIV-positive mothers means that virological tests are needed to accurately diagnose infants; these are more complicated than the rapid tests used for adults

Less than half of HIV-exposed children are tested within their first two months of life<sup>iv</sup>; and without ART, 10-15% of HIV-positive children die between 4-6 weeks of life<sup>v</sup>

Frequent stock-outs of HIV test kits at facilities providing care for infants and children mean that some do not receive timely HIV testing

Long turnaround times for virologic HIV test results mean that some children do not receive their test results and remain unidentified

Health care workers often lack adequate training and confidence for gaining parental consent and administering HIV tests for children

HIV testing is not routinely offered for children of HIV-positive adults

## PROGRAM NEEDS

Sensitize community members and health care providers for increased uptake of pediatric HIV testing

Implement point-of-care (POC) early infant diagnosis (EID) testing and expand community testing approaches

Reduce turnaround time of EID test results and ensure children and their caretakers obtain their results

Increase uptake of PMTCT and EID services through 18 months after birth (or after the cessation of breastfeeding if breastfeeding exceeds 18 months)

Increase uptake of postnatal care

Establish routine provider-initiated testing and counseling (PITC) for children across health care settings: adult HIV clinics (test all children of HIV-positive parents), inpatient pediatric wards, services for sick and malnourished children, TB clinics

Introduce innovative methods to track HIV-exposed infants through the end of the breastfeeding period

Integrate HIV and maternal and child health (MCH) services to ensure mother-child pairs receive linked care across a continuum of services

<sup>iv</sup> UNAIDS. The Gap Report. [http://www.unaids.org/sites/default/files/media\\_asset/UNAIDS\\_Gap\\_report\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Gap_report_en.pdf). Published July 2014. Updated September 2014.

<sup>v</sup> Newell M, Coovadia H, Cortina-Borja M, et al. Mortality of infected and uninfected infants born to HIV-infected mothers in Africa: a pooled analysis. *The Lancet*. 2004; 364(9441): 1236-1243.

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## CHALLENGES

HIV-related stigma and discrimination prevent caretakers from seeking out ART for children

Higher viral loads in children and more rapid disease progression than adults leaves a short window of opportunity to initiate ART before sickness and death

Delayed test results for HIV-infected children lead to significant loss-to-follow-up (LTFU) and poor enrollment in care and initiation on ART

Stock-outs of pediatric antiretroviral (ARV) formulations result in lack of access to lifesaving drugs

Providers lack the skills and confidence to initiate pediatric ART and manage complex dosing and care

Shortages of physicians and policy constraints on nurses for initiating pediatric patients on ART are barriers to treatment initiation in children

A limited number of health facilities are providing ART for children

Lack of integration of HIV services for children within primary care services, leading to referrals to remotely located facilities and results in LTFU

Some countries are implementing pre-2013 WHO guidelines for initiation of children on treatment, resulting in barriers for children accessing ART

## PROGRAM NEEDS

Integrate pediatric HIV and ART services into MNCH and primary care service settings

Ensure development and implementation of policies supporting nurse prescription of pediatric ART

Increase training and capacity of health care workers to effectively deliver pediatric HIV care and treatment and provide adherence counseling and support

Develop linkages and cross-referral systems across clinical programs for children (e.g. nutrition, immunization, integrated management of childhood illnesses, etc.) and pediatric HIV care and treatment

Assure adequate and consistent ARV supplies by simplifying markets and pooling procurement for commodities

Expand family-centered care models to ensure mother-child pairs receive joint care

Promote adoption and implementation of updated WHO guidelines to allow for more children to access ART

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all children  
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## CHALLENGES

Low rates of long-term, consistent adherence and retention on ART due to dependence on adults for care, lack of HIV status disclosure to child<sup>vi</sup>, and stigma

Limited number of child-friendly ARV formulations; existing formulations are difficult to administer, may have a poor taste, heavy pill burden, or require refrigeration

Limited continuous education and support for parents and caretakers in managing lifelong treatment for HIV-positive children

Unknown health impacts of longer lifetime drug exposure and exposure during period of growth and organ maturation

Lack of point-of-care viral load testing in many settings to evaluate the efficacy of pediatric ART

Higher rates of first-line treatment failure in children compared to adults

Limited second- and third-line ART choices for children and lack of national guidelines on those treatments in many countries

Lack of health care worker training and comfort in monitoring and managing ART in children

Fear and lack of expertise among health care workers and caretakers in disclosing HIV status to children

Lack of expertise and training in managing child's transition to adolescence and addressing the psychosocial and reproductive and sexual health needs during this transition into adult care

## PROGRAM NEEDS

Establish evaluation tools and tracking systems to ensure long-term follow-up of HIV-infected infants and children

Support the development of fixed-dose combinations, and improved pediatric formulations that are child-friendly and long-acting

Support adherence and retention through innovative approaches linking community-based structures and facilities (e.g. family and community structures, adolescent-specific, mHealth)

Provide training and education to health care workers and caretakers for disclosing HIV status to children and adolescents

Establish and expand peer support groups for adolescents on ART; improve psychosocial support as well as clinical management

Develop innovative and effective approaches for transitioning adolescents into adult care

Build capacity of health care workers for management of pediatric ART including dosing, ARV resistance and monitoring for treatment failure

Promote national policy, guidelines, and training on the 2nd and 3rd line ART options for children

- Scale up laboratory monitoring for ART including HIV viral load, CD4, and HIV drug resistance
- Train health care workers to interpret and act on laboratory and clinical findings

<sup>vi</sup> World Health Organization. HIV and adolescents: Guidance for HIV testing and counselling and care for adolescents living with HIV. Geneva, Switzerland: World Health Organization; 2013; 23.