Global Perspectives on Treat All for Children and Adolescents with HIV

PATA Global Summit
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New HIV infections are declining among children!

Courtesy of Mary Mahy, UNAIDS
And as children “age out” into adulthood the total number of children with HIV is also declining.
And the epidemic is shifting in terms of age... fewer young children, more adolescents living with HIV

If you are seeing these changes in your own clinics and programmes – CONGRATULATIONS!
This means your PMTCT efforts are working and your clients are growing up on ART...

Source: UNAIDS, 2017

Children living with HIV by age group, globally, 2000-2016

2.1 million children living with HIV in 2016
But paediatric treatment coverage is still too low...

In 2016, 920,000 children on ART (43%) vs 15 million adults on ART (54%)

Source: UNAIDS, 2017
And the problem is with the youngest and the oldest children

ART coverage by age group (Among countries that submitted age specific data)
So, what are the concrete steps that we can take?
Implement Treat All policies for children

There should be ZERO “pre-ART” kids in your clinic registers...if there are, TREAT them! If there any who have been lost to follow up, tracking, finding and bringing them back to care should be a priority.
Improve Linkage to ART

**Gaps**
Low linkages- Incomplete referral systems

**Intervention:**
- Placement of focal person/peer at testing points to facilitate escort to CTC
- OVC case managers escort newly identified CLHIV from the community to CTC
- Same day initiation of HIV care

**LINKAGE INCREASED FROM 71% -> 97-99%**

Source: ACT Initiative in Tanzania
Don’t delay ART start!

Two cohorts of HIV infected children:
- Infant cohort started ART before age 5 months
- Older child cohort started ART between 1.5 – 5 yrs

Followed up on ART for 5 – 10 years

**Neurodevelopmental domain** (N=54)

<table>
<thead>
<tr>
<th>Neurodevelopmental domain</th>
<th>Mean difference z-scores Late vs early-ART* (p&lt;0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive ability</td>
<td>-0.36</td>
</tr>
<tr>
<td>Nonverbal test performance</td>
<td>-0.43</td>
</tr>
<tr>
<td>Short-term memory</td>
<td>-0.43</td>
</tr>
<tr>
<td>Executive function</td>
<td>-0.54</td>
</tr>
<tr>
<td>Motor</td>
<td>-0.62</td>
</tr>
</tbody>
</table>

After 5-10 yrs of ART, children who started ART early had:

- Superior neuro-development – both cognitive and motor function
- Consistently higher CD4 counts

...compared to those who started ART after age 1.5 years

Slide: Courtesy of Elizabeth Obimbo
Consider Same-day ART for children/adolescents

<table>
<thead>
<tr>
<th>ENABLERS</th>
<th>BARRIERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health providers (inc peers) with good counseling skills</td>
<td>Heavy workload for health workers</td>
</tr>
<tr>
<td>Uninterrupted supply of ARV commodities at sites</td>
<td>Co-infections that require staggering treatment</td>
</tr>
<tr>
<td>Simplified initiation processes</td>
<td>Poor counselling skills</td>
</tr>
<tr>
<td>Mother or caregiver already receiving ART</td>
<td>ARV drug stock outs</td>
</tr>
<tr>
<td>Physically escorting clients from test site to ART clinic</td>
<td>“Unaccompanied” minors</td>
</tr>
<tr>
<td>Decentralization of pediatric HIV care and treatment to the lowest level health facilities</td>
<td></td>
</tr>
</tbody>
</table>
Promote nurse-initiated ART for children

- In Tanzania in 2013, Peds coverage was just 26.5% coverage
- Severe physician shortage (0.03 per 1,000 population)
- Nurse initiated management of ART (NIMART) proposed to address this
- Policy adoption → SOP → in-service training → nurse service delivery model permitting testing, ART, and dispensing

By the end of 2016, peds coverage increased to 52.2%

Source: ACT initiative, Tanzania
Integrate TB and HIV diagnosis to identify CLHIV

Table 2. Estimated incidence of culture-confirmed tuberculosis (TB) among HIV-infected and HIV-uninfected infants.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>All infants</th>
<th>HIV-uninfected infants</th>
<th>HIV-infected infant</th>
<th>Relative risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis incidence</td>
<td>83.1 (73–94)</td>
<td>65.9 (57–75)</td>
<td>1596 (115–2132)</td>
<td>24.2 (17–34)</td>
</tr>
<tr>
<td>Pulmonary tuberculosis incidence</td>
<td>78.7 (69–89)</td>
<td>62.5 (53–72)</td>
<td>1505.6 (1075–2023)</td>
<td>24.1 (17–34)</td>
</tr>
<tr>
<td>Extrapulmonary tuberculosis incidence</td>
<td>28.2 (22–34)</td>
<td>22.9 (18–29)</td>
<td>481.8 (257–751)</td>
<td>21.0 (11–35)</td>
</tr>
<tr>
<td>Disseminated tuberculosis incidence a</td>
<td>16.6 (12–21)</td>
<td>14.1 (10–18)</td>
<td>240.9 (87–432)</td>
<td>17.1 (6–34)</td>
</tr>
<tr>
<td>Miliary tuberculosis incidence</td>
<td>10.9 (7–15)</td>
<td>9.3 (6–13)</td>
<td>150.6 (31–301)</td>
<td>16.2 (3–37)</td>
</tr>
<tr>
<td>Tuberculosis meningitis incidence</td>
<td>9.2 (6–13)</td>
<td>7.9 (5–11)</td>
<td>120.1 (28–258)</td>
<td>15.2 (3–39)</td>
</tr>
</tbody>
</table>

* Disseminated tuberculosis was defined as miliary tuberculosis, tuberculosis meningitis, or disseminated disease, diagnosed on the basis of positive culture results of isolates from blood culture and/or bone marrow.

Source: Hesseling et al. 2009
Integrate TB and HIV diagnosis to identify CLHIV

- Integrating HTS into TB clinics
  - Training of TB sector HCW on PICT
  - Allocation of Peer educator to escort HIV+ children
  - Provision of incentives for Peer educators
  - Development of linkage tool to capture ART initiation

Source: ACT initiative, Mozambique
What is retention like in children?

Retention of HIV-Infected Children in the First 12 months of ART

<table>
<thead>
<tr>
<th>12 month retention on ART (%)</th>
<th>Author, year</th>
<th>Location</th>
<th>N</th>
<th>Sex</th>
<th>Age</th>
<th>CD4</th>
<th>WHO Stage III/IV</th>
<th>LFU</th>
<th>Dead</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>Ekouevi, 2011</td>
<td>West Africa</td>
<td>2170</td>
<td>45</td>
<td>5</td>
<td>13</td>
<td>NR</td>
<td>461 (21)</td>
<td>169 (8)</td>
<td>NR</td>
</tr>
<tr>
<td>73</td>
<td>Scott, 2013</td>
<td>Zambia</td>
<td>1334</td>
<td>NR</td>
<td>4</td>
<td>14</td>
<td>NR</td>
<td>290 (22)</td>
<td>67 (5)</td>
<td>NR</td>
</tr>
<tr>
<td>78</td>
<td>Auld, 2014</td>
<td>Côte d'Ivoire</td>
<td>2110</td>
<td>46</td>
<td>5.1</td>
<td>11</td>
<td>82</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>79</td>
<td>McNairy, 2013</td>
<td>East Africa</td>
<td>17712</td>
<td>51</td>
<td>4.6</td>
<td>15</td>
<td>48</td>
<td>2834 (16)</td>
<td>886 (5)</td>
<td>NR</td>
</tr>
<tr>
<td>80</td>
<td>Ahoua, 2011</td>
<td>Uganda</td>
<td>87</td>
<td>45</td>
<td>5.4</td>
<td>11</td>
<td>76</td>
<td>8 (9)</td>
<td>3 (3)</td>
<td>6 (7)</td>
</tr>
<tr>
<td>80</td>
<td>Eley, 2006</td>
<td>South Africa</td>
<td>409</td>
<td>46</td>
<td>1.9</td>
<td>12</td>
<td>99</td>
<td>19 (5)</td>
<td>63 (15)</td>
<td>46 (11)</td>
</tr>
<tr>
<td>85</td>
<td>Dikemena, 2014</td>
<td>Congo</td>
<td>522</td>
<td>49</td>
<td>4.7</td>
<td>NR</td>
<td>80</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>85</td>
<td>Meyer-Rath, 2013</td>
<td>South Africa</td>
<td>288</td>
<td>NR</td>
<td>4.0/5.8</td>
<td>12/14</td>
<td>NR</td>
<td>34 (12)</td>
<td>9 (3)</td>
<td>NR</td>
</tr>
<tr>
<td>88</td>
<td>Jaspan, 2008</td>
<td>South Africa</td>
<td>259</td>
<td>47</td>
<td>2.2</td>
<td>13</td>
<td>NR</td>
<td>4 (2)</td>
<td>27 (10)</td>
<td>NR</td>
</tr>
<tr>
<td>90</td>
<td>Kids-ART-Linc, 2008</td>
<td>Africa</td>
<td>2405</td>
<td>48</td>
<td>4.9</td>
<td>NR</td>
<td>NR</td>
<td>109 (5)</td>
<td>139 (6)</td>
<td>102 (4)</td>
</tr>
<tr>
<td>90</td>
<td>Sengayi, 2013</td>
<td>South Africa</td>
<td>4266</td>
<td>49</td>
<td>4.2</td>
<td>15</td>
<td>74</td>
<td>323 (8)</td>
<td>113 (3)</td>
<td>202 (5)</td>
</tr>
<tr>
<td>95</td>
<td>vanGriensven, 2008</td>
<td>Rwanda</td>
<td>315</td>
<td>50</td>
<td>7.2</td>
<td>14</td>
<td>40</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>71–95%</td>
<td>TOTAL</td>
<td></td>
<td>31877</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4082</td>
<td>1476</td>
<td>356</td>
</tr>
</tbody>
</table>

Source: Abuogi LL PLOS One 2016
And what about rates of VL suppression?

![Viral Suppression Rate in Children Retained on ART](chart)

- **VL >1000 copies/ml**
- **VL undetectable**

<table>
<thead>
<tr>
<th>Country</th>
<th>Rate</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>69.0%</td>
<td>N=461</td>
</tr>
<tr>
<td>Tanzania</td>
<td>61.2%</td>
<td>N=399</td>
</tr>
<tr>
<td>Mozambique</td>
<td>64.4%</td>
<td>N=682</td>
</tr>
</tbody>
</table>

Failure rates of 31-39%

Source: CDC - ACT Initiative
What drives low retention in children?

- Parent/caregiver interpretation of health status of child
- Understaffing at clinics
- Long clinic wait times
- Advanced Disease
- Inadequate clinical/lab services
- Malnutrition
- Mental health problems
- Proximity to clinic
- Stigma
- Age (<2yo)
- Loss of caregiver
- Lack of Disclosure
- Economic Barriers

Source: B. Phelps AIDS 2013
Family based approaches to improve retention

**Family Based Care Approach**

- All family members are seen at the same time at HIV clinic and receive all package of services needed for the health of the family including counselling and testing for HIV.
- HIV+ family members have their clinical appointment on the same day with the same doctor.
- AVRs pick-up and Lab specimen collection are also done at the same day and time for all family members.
- Counsellor provides morning lectures and identifies potential families for this service.

Source: ACT initiative, Mozambique
Community interventions to address challenges

**Gap:** Low retention

**Interventions:**
- Children clubs established
- Peer counsellors identified and linked to supported health facilities.
- Lay counsellors tracked clients in the community

Source: ACT initiative, Tanzania
Community interventions to address challenges

- Cohort study
- Community-based support
- Adolescents and youth on ART in South Africa
- 6,706 clients at 47 facilities

Source: Kheth‘Impilo - Fatti G et al. IAS 2017
Community interventions to address challenges

• Comprehensive toolkit built on pilot experience
• Step by step guide how to implement C3 (Clinic-CBO Collaborations)
• Aim to optimise local collaborations between CBOs and local clinic partners
• Launch November 2017 AIDS Impact & December 2017 ICASA
Resources

• UNICEF’s learning collaborative [http://www.childrenandaids.org/](http://www.childrenandaids.org/)

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