Paediatric HIV Estimates
2016

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Estimates process

• Country teams develop estimates using Spectrum software annually (www.avenirhealth.org)
• Software guided by UNAIDS Reference Group on Modeling Estimates and Projections (www.epidem.org)
• Estimates change from one year to the next
  – Models are improved every year
  – Country teams update data entered in models
• Historical values are updated as well based on latest science
Spectrum structure

Demographic Data

Program Statistics

Epidemic Patterns

Surveillance and Survey Data

Demographic and Epidemic Calculations
- Mother-to-child transmission
  - Child model
  - Adult model

Prevalence to incidence trends

Results
- Number HIV+
- New Infections
- AIDS deaths
- Eligible for ART
- Need for PMTCT
1 Demographic Data
- Total fertility rate
- Age distribution of fertility
- Number of women by age 15-49

2 Surveillance and Survey Data

4 Fertility Adjustment
- Reduced fertility among HIV+ women

3 Epidemic Patterns
- Female/male ratio of incidence
- Age distribution of incidence
- Mortality

5 Number of births to HIV+ women

6 Program Statistics
- Number receiving ARV prophylaxis or treatment by regimen

7 Number of children born HIV+

8 Breastfeeding Patterns

9 Total number of new child infections
Child Model

1. New child infections distributed across different CD4 %

2a. Child progression among children 0-4 years

2b. Child progression among children 5-14 years

3. Off ART survival Patterns by timing of infection, and CD4 category

3. On ART survival from IeDEA Patterns by sex, age, CD4 percent, CD4 count and region
Important differences in child estimates

2016 results EMBARGOED UNTIL 8 June 2016

-- 2015 estimates

--- 2015 bounds

-- 2016 estimates

Source UNAIDS 2016 estimates
Recommendations made in 2015

Paediatric Reference Group Meeting October 2015
Report available at www.epidem.org

1. Update mother-to-child transmission probabilities to reflect latest research
   – last update in 2012
2. Use IeDEA data on distribution of children starting ART
   – Previously distributed based on need for ART
3. Incorporate drop out of women on ART during post natal period
1. Update transmission probabilities

Impact: Fewer new child infections
Test results only reflect changes in assumptions
Do not reflect updates from countries
THESE ARE NOT 2016 ESTIMATES
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2. Distribution of children starting on ART

- IeDEA provided distribution for three regions, by single year age group
- Tanzania and South African programme data for comparison
- Translated into relative risk of starting on ART by single age
- Impact: Higher mortality historically, fewer children living with HIV
Overall fewer deaths … but fewer children living with HIV

Case fatality rate 0-14 is 10-12% higher

Test results only reflect changes in assumptions
Do not reflect updates from countries – limited to 21 countries
THESE ARE NOT 2016 ESTIMATES
3. Drop out among breastfeeding women receiving ART

- Requested IATT M&E working group to identify potential countries with data
- Not yet implemented
- Data?

- No change but implies we might be underestimating new child infections
Test results only reflect changes in assumptions
Do not reflect updates from countries
THESE ARE NOT 2016 ESTIMATES
New 2016 results

EMBARGOED UNTIL 8 JUNE 2016
Significant decline in new child infections

Source: UNAIDS 2016 estimates
Child ART coverage similar to adults

EMBARGOED UNTIL 8 JUNE 2016

ART coverage, globally, 2010-2015

Source: UNAIDS 2016 estimates
AIDS deaths declining among children (increasing among ages 15-19)

EMBARGOED UNTIL 8 JUNE 2016

AIDS deaths among children, by age

Source: UNAIDS 2016 estimates
Additional information

Progress report on the Global Plan available tomorrow at unaids.org

- UNAIDS AIDS update released on 31 May
- UNAIDS Global report due out in early July