Latest Estimates for Pediatric and Adolescent HIV Prevalence and Coverage

Mary Mahy, ScD
UNAIDS, Geneva
Declaration of interest

Nothing to disclose
Introduction

- Challenges in counting people living with HIV, new infections, AIDS deaths
- Country-produced HIV estimates using models
- Compiled by UNAIDS and released every year
  - Includes a full time series of estimates
  - By age and sex
Progress in reaching pregnant women living with HIV with ARVs ...

Percent of HIV+ pregnant women receiving ARVs to prevent vertical transmission, globally, 2010-2016

Source: UNAIDS 2017 estimates.
... reducing new HIV infections among children

New HIV infections among children, globally, 2000-2016

Source: UNAIDS 2017 estimates.
Number children living with HIV declining as children “age out” and fewer new infections

2.1 million (1.7 million – 2-6 million) children living with HIV in 2016

Source: UNAIDS 2017 estimates.
Declining numbers in youngest age group, increasing numbers in 10-14 year old age group.

Source: UNAIDS 2017 estimates.
43% child ART coverage in 2016 vs 54% among adults

- 920,000 children were receiving antiretroviral treatment in 2016

Source: UNAIDS 2017 estimates.
Adult to child treatment gap in Western and Central Africa is larger than Eastern and Southern Africa

Source: UNAIDS 2017 estimates.
Global ART coverage among adolescents not available
Very few countries report data by five year age group

84 Countries reported numbers on ART for age 10–14 years
through Global AIDS Monitoring, 2017

Data submitted in June 2017 for December 2016.
Source: UNAIDS, June 2017
ART coverage by age group
Among countries that submitted age specific data

Source: UNAIDS 2017 estimates.
90-90-90 targets for children

Measuring the first 90: Knowledge of status (number diagnosed), currently use those on treatment

Measuring the third 90: Viral load suppression

- 52 of 168 countries reported data for children on VLS through Global AIDS Monitoring system
- In Eastern Southern Africa 5 of 16 countries reported (representing 4% of children receiving ART in the region)
  - 37% of children on ART had viral load testing in these 5 countries
  - In these 5 countries… 62% were virally suppressed
- Viral suppression ranged from 41% in Western and Central Africa to 90% in Western Europe and North America
45% reduction in AIDS deaths among children since 2010

Source: UNAIDS 2017 estimates.
All age groups show declines in AIDS deaths

Source: UNAIDS 2017 estimates.
Ongoing model improvement

- Why do the values change (e.g. from 1.8 million to 2.1 million)?
- Models continue to be improved – new surveys with prevalence among children helping us understand the epidemic
- Changes in models can lead to fluctuating values
- Lack of age specific data


Survey refers to Public Health Impact Assessment surveys available at phia.icap.columbia.edu
Structure of child model in Spectrum AIDS Impact Module

1 Demographic Data
- Total fertility rate
- Age distribution of fertility
- Number of women aged 15-49 years (by five-year age group)

2 Surveillance and survey Data

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

4 Fertility Adjustment
- Reduced fertility among HIV+ women

5 Number of births to HIV+ women

6 Number of women receiving ARV prophylaxis or treatment by regimen and retention

7 Number of children born HIV+

8 Breastfeeding Patterns + incidence during BF and retention

9 Number of new child HIV infections

10 Children living with HIV

11 Number of children receiving ART and contrimoxazole

12 Disease progression among children not receiving ART

13 Distribution of age of ART initiation

14 Survival among children receiving ART

15 AIDS-related deaths among children

Assumptions

Country team input

Calculation

Source: Mahy et al. AIDS 2017
Conclusions

• Last mile to close the tap of new child infections
  – Will require innovation in diagnosing women living with HIV
  – Ensuring they understand the value of adherence
• Gap between adult and child ART coverage
• AIDS deaths are declining in all age groups
In 2020 there will be fewer children living with HIV

Children living with HIV

2010
- New child HIV infections: 290,000
- Children living with HIV: 2,600,000
- AIDS-related deaths: 210,000
- Children living with HIV age 15: 91,000

2016
- New child HIV infections: 160,000
- Children living with HIV: 2,100,000
- AIDS-related deaths: 120,000
- Children living with HIV age 15: 110,000

2020 (Projected)
- New child HIV infections: 30,000
- Children living with HIV: 1,700,000
- AIDS-related deaths: 25,000
- Children living with HIV age 15: 140,000

* Projection for 2020 assumes the fast track targets are met.

Source: Special analysis of UNAIDS 2017 estimates.
70% of new HIV infections among children are in 10 countries.

Source: UNAIDS 2017 estimates.