

Reaching children of key populations is critical to closing the pediatric HIV treatment gap and achieving health equity: A multi-country analysis

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Introduction

- Key Populations (KP), defined by the World Health Organization (WHO) as men who have sex with men (MSM), transgender people (TG), female/male sex workers (FSW/MSW), people who inject drugs (PWID), and people in prisons or other closed settings – belong to family units and the needs of their children can be overshadowed as they face a double burden: both the effects of HIV/AIDS and associated marginalization and exclusion encountered by their parents.
- Children of KP (CKP) experience extreme vulnerability and risk in all core areas of care, development, and protection, including lack of birth certificate, food insecurity and malnutrition, low school enrolment, poor access to essential health services, inadequate childcare, and physical and sexual violence.
- Programming that reaches KP who are parents often does not incorporate or provide specific services or address the needs of their children, therefore leaving these marginalized children with an elevated HIV risk with low testing uptake and poor linkage to treatment initiation and other health services.
- PEPFAR's strategic direction released in 2022 also calls for health equity for priority populations, including adolescent girls and young women, children, and KP, and intentionally prioritizes these groups for accelerated access to evidence-based HIV prevention and treatment programming.

Background

- The PEPFAR-supported FHI 360 project, Meeting Targets and Maintaining Epidemic Control (EpiC), aims to improve access to HIV services for KP and priority populations.
- We analyzed pediatric HIV testing data from the EpiC program to better understand subpopulations of at-risk children (<15 years) and determine how to improve support to KP and their families.

Methods

- Children were defined as CKP if they were children of FSW/MSW, MSM, PWID or TG people while children of non-KP (CNKP) comprised children whose parents/caregivers did not self-report as KP.
- Aggregate routinely collected program data from October 1, 2021 to September 30, 2022 from the EpiC project across five countries that reported HIV testing and treatment data for children <15y/o disaggregated by CKP and CNKP were collected for this analysis.
- Burundi, Côte d'Ivoire, Democratic Republic of Congo (DRC), Tanzania, and Togo were selected because they reported disaggregated data for CKP and CNKP.

Results

- Of the 5,651 children tested, 2,974 (53%) were reached through index testing and 397 (13% positivity) were diagnosed with HIV: 98% (1,052/1,070) of all CKP and 42% (1,922/4,581) of all CNKP tested were reached through index testing (Table 1).
- The index testing positivity was higher at 17% among CKP vs 11% for CNKP overall and when analyzing country specific data (Table 1).
- When comparing baseline (October 1, 2021 to December 31, 2021) to end line (July 1, 2022 to September 30, 2022), the number of CKP diagnosed with HIV and the index testing positivity increased slightly, from 32 to 41 and from 16% (32/200) to 19% (41/214), respectively (Figure 1).
- When analyzed by age group, 67% (721/1,074) of the index testing was among ages 5+ y/o. However, HIV positivity through index testing among CKP was higher in the age group < 5 y/o (36% in < 1 y/o and 23% in 1-4 y/o). CKP <5 y/o accounted for 46% (83/180) of all CKP living with HIV reached through index testing (Table 3).
- Within the same time period, the project offered index testing to 93% of 6,735 FSWs living with HIV (FSLHIV), resulting in 87% acceptance rate. The 5,408 FSW living with HIV who accepted, elicited 1,357 biological children, resulting in 69% being tested and 14% case finding (Figure 2)

Table 1. HIV testing (index and non-index) among CKP and CNKP, all countries, October 1, 2021 to September 30, 2022

Indicator	All Countries		Total (% distribution)
	Children of Non-KP	Children of KP	
Tested Index	1,922	1,052	2,974 (53%)
Tested Positive – Index	219	178	397
% Positivity Index	11%	17%	13%
Tested Non-index	2,659	18	2,677 (47%)
Tested Positive Non-index	141	3	144
% Positivity Non-index	5%	17%	5%
Tested Total	4,581	1,070	5,651 (100%)
Tested Positive Total	360	181	541
% Positivity Total	8%	17%	10%

Figure 1. Index testing quarterly trends for CKP and CNKP, all countries, October 1, 2021 to September 30, 2022

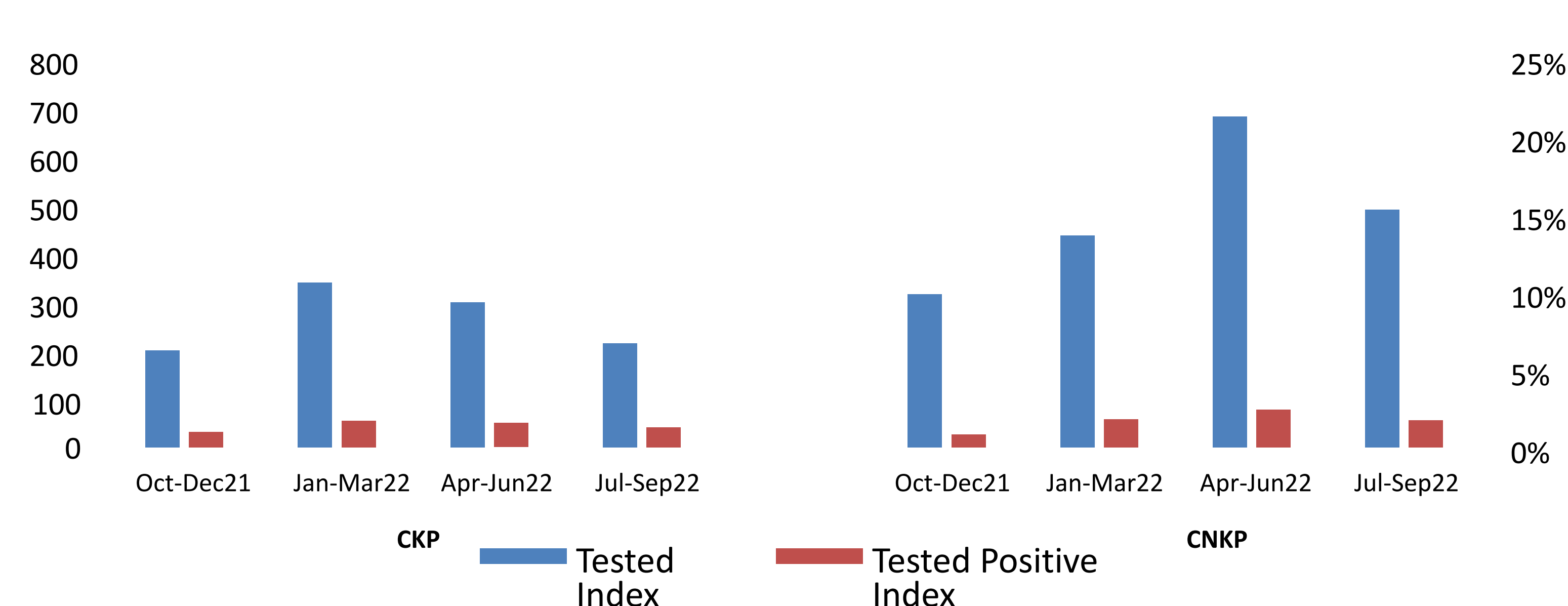
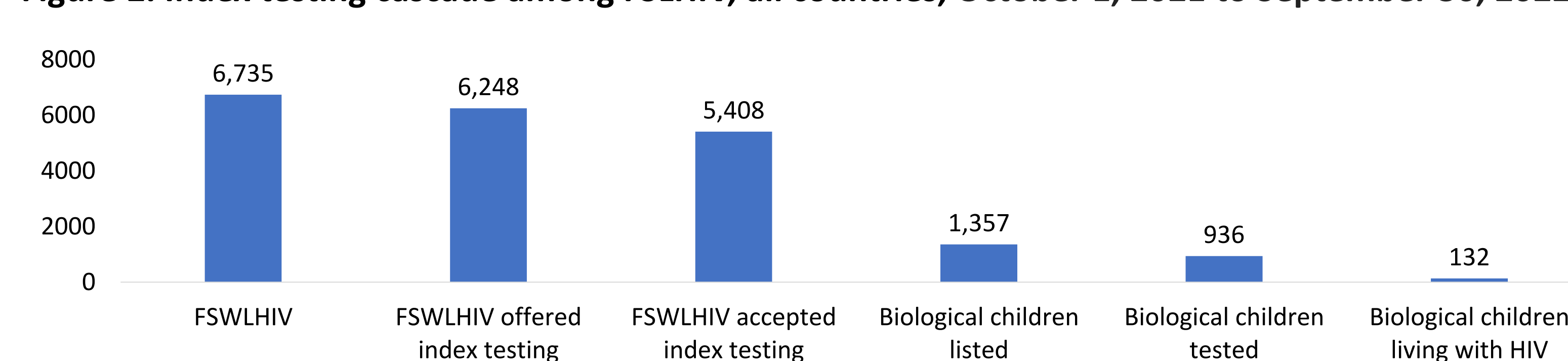


Table 2. CKP index testing volume and results by age group, all countries, October 1, 2021 to September 30, 2022

Indicator	Age group				Total
	<1y/o	1-4y/o	5-9y/o	10-14y/o	
Tested	11	342	421	300	1,074
Tested Positive	4	79	54	43	180
% Positivity Index	36%	23%	13%	14%	17%

Figure 2. Index testing cascade among FSLHIV, all countries, October 1, 2021 to September 30, 2022



Discussion

- Most of the children were CNKP, however, a third of the children were CKP and predominantly identified through index testing services.
- The overall positivity for all children reached was high at 10%, revealing that the program is reaching biological and most at-risk children.
- The positivity was 2 times higher for CKP than CNKP which indicates not only the effectiveness of EpiC's pediatric case-finding approaches but also the higher risk of HIV in this subpopulation of children.
- High case finding among CKP ages < 5y/o suggests a high vertical transmission rate and calls for urgent action to ensure KP and clinical programs are working closely together to ensure prevention of vertical transmission (PVT) services for pregnant and breastfeeding KP are prioritized and scaled up, including pre-exposure prophylaxis.
- Strategies to reach CKP should build on current service delivery platforms through DSD approaches, integration and coordination of KP, family planning, PVT, pediatric HIV, OVC, and other maternal child health services resulting in improved adult, adolescent, and pediatric clinical cascades and reduced impact of HIV on families.
- No routinely collected data describes why 5,408 FSLHIV who accepted index testing resulted in only 936 CKP being tested for HIV: anecdotal information that CKP are often living with other caregivers and in geographies outside the project catchment area; stigma and discrimination prevent them from accessing HIV testing services; not all FSLHIV had children, and some FSW may have already tested their children.
- Mentor mothers are recognized as playing major roles: maternal health education, HIV testing and treatment, adherence, retention, and HIV disclosure; addressing stigma and discrimination through competent KP-friendly services and reaching CKP at other caregivers' residences; addressing the need to increase the reach to biological children of FSLHIV through peer support.

Limitations

- Findings may be driven disproportionately by the large volume of results coming from a high-burden country like DRC (66% (3,732) of all tests), possibly masking the difference in patterns in countries that contributed a relatively small amount to the total results.
- We only reviewed the FSW index testing cascade results because they represented the largest group of KP within the EpiC project, though we acknowledge that the index testing cascade of biological children of other KP should be investigated.
- Some CNKP might have been from an undisclosed KP caregiver or from a partner of a KP, which could explain the relatively high positivity within this subpopulation.

Conclusions

- EpiC's index testing and non-index testing approaches were effective in reaching children at high risk of HIV.
- Among the CKP reached with testing services, a high percentage were diagnosed with HIV, further supporting that many of these children are at high risk and need a focused approach and more investment from donors and governments to ensure they are reached, identified, and linked to care and treatment in a timely manner.
- As mentioned in the limitations section, most of these results came from DRC and were among children of FSW compared to other KP groups.
- Given the number of CKP under 5y/o who were diagnosed with HIV, this also calls for scaling up and strengthening PVT and family planning services to KP to not only prevent new child infections, but also ensure KP who are pregnant and breastfeeding, and their children, have equitable access to high-quality, life-saving health services.