Know Your Epidemic, Know Your Response: The Case for Continued Investment in Young People

The first round of the President’s Emergency Plan for AIDS Relief (PEPFAR) provided unprecedented support for the expansion of HIV prevention programs targeting young people aged 10-24, yet HIV and AIDS among young people still remains an enormous global health challenge. The first evaluation of PEPFAR concluded that while PEPFAR had made a good start toward meeting their five-year performance targets, there was a need to strengthen prevention efforts by using data to determine the most appropriate interventions, address the factors that put women and girls at greater risk, and emphasize evidence-based approaches.¹

In the spirit of UNAIDS’ effort to “know your epidemic, know your response,” this paper presents a justification for a sustained focus on young people in the next round of PEPFAR programming. Using data from four PEPFAR priority countries, the paper demonstrates that evidence-based HIV programming for young people represents a strategic, cost-effective investment towards combating HIV in both generalized and concentrated epidemics.*

Young People and HIV/AIDS

Global Context:
Young people aged 10-24 comprise roughly one third of the world’s population,² and youth aged 15-24 account for almost half of all new HIV infections globally.³ Young people, particularly young women, are more vulnerable to HIV infection due to biological factors, persistently high levels of sexual and gender-based violence, and cultural, psychosocial, and economic factors that contribute to high-risk behaviors (i.e., unprotected sex, multiple concurrent partners, and transactional or intergenerational sex).⁴-⁷ This vulnerability is compounded by poverty, gender inequality, and limited access to appropriate, high quality sexual and reproductive health (SRH) information and services.

While HIV prevention efforts often target unmarried, in-school adolescents, the reality is that many young people in the developing world are either married or in union.⁸ It is widely documented that married women or women in union are at elevated risk of contracting HIV due to increased frequency of unprotected sex and their inability to negotiate condom use with their husbands or partners.⁹-¹⁵ This risk is amplified for young women, who are likely to be partnered with older men, to be less educated, to have less exposure to mass media and prevention messages, and to be less informed about their own SRH.

In concentrated epidemics, young people make up a significant portion of most at-risk populations (MARP), including injecting drug users (IDUs), female sex workers (FSWs), and men who have sex with men (MSM).¹⁶ The stigma that is often associated with these groups, combined with

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young people’s lack of agency, often compound their vulnerability to HIV infection. According to the 2008 AIDS in Asia Commission report, over 95% of all new HIV infections among young people in the Asia region occur among youth MARPs. However, over 90% of HIV resources for young people are spent on low-risk youth, who represent less than 5% of infections.\(^{17}\)

**Data Challenges:**
Young people are clearly an important target group within global efforts to stem the HIV epidemic, yet available data masks the severity of the impact of HIV among this population. Accurate and timely estimates of HIV incidence can be challenging to generate. Therefore, prevalence indicators disaggregated by age are often used as a proxy measure to pinpoint where HIV infection is most likely occurring. Prevalence data, however, is very limited in its ability to measure incidence\(^{1}\), and can even disguise the true severity of HIV infection among sexually active young people. Prevalence data is reported relative to an entire age cohort. For adults, prevalence will more or less reflect actual rates of sexual transmission because most adults are sexually active. The sexual behavior patterns of youth, however, are different from adults. Many are not yet sexually active, and those who are may engage in sex only sporadically and not use condoms consistently\(^{9, 20-22}\). As a result, a seemingly low prevalence among young people aged 15-19 may actually reflect much higher rates of infection among those who are sexually active.

In addition, prevalence statistics for each age group do not reflect the time of infection and it is commonly acknowledged that some percentage of new infections occurred in prior years. Thus, high prevalence among adults aged 25-29 indicates the need to target young people 24 years of age and under with prevention efforts in order to stem new infections.

**Case Studies**
The case studies below discuss country specific examples of generalized (Kenya and South Africa) and concentrated (Vietnam and India) epidemics, highlighting the need for PEPFAR to sustain and strengthen its focus on young people by implementing evidence-based, culturally-competent interventions and integrated strategies that can successfully limit transmission and curb the global epidemic.

**South Africa**
Approximately 15 million South Africans are between the ages of 10-24.\(^2\) Unequal gender norms, poverty, and a high incidence of sexual violence shape the sexual lives of South African young people and increase their risk of HIV infection. In South Africa:

- HIV prevalence is 8.7% among youth aged 15-24 with this group accounting for 34% of all new infections.\(^{24}\)
- Over 27% of girls aged 15-19 report sex with partners who are at least 5 years older.\(^{24}\) Intergenerational sex exacerbates the HIV risks for young women, not only because it exposes them to higher-prevalence age cohorts, but also because of the power differentials and transactional nature of these relationships.
- The median age of sexual debut for young women is 18.4,\(^{24}\) however level of education greatly influences age of sexual debut, with women aged 20-24 with less than eight years of schooling reporting sexual debut two years earlier than the national average (16.5 compared to 18.5).\(^{25}\)
- Incidence of rape is extremely high in South Africa and large numbers of young women experience coercion at sexual debut.\(^{26, 27}\) Studies also show that more than 27% of men reported having raped a woman and 4.6% report having raped a woman in the last 12 months.\(^{28}\)

\(^{1}\) Changes in incidence rates are not the only factors that impact HIV prevalence rates. A high death rate among PLHIV can reduce prevalence rates, just as effective and widespread treatment can prolong the lifespan of PLHIV, which increases prevalence rates. Other demographic changes, such as immigration and emigration of groups disproportionately affected by HIV, will also impact national indicators, as will changes in data collection.
As a result of the above, there are significant gender disparities in prevalence among 15-24 year-olds (13.9% for females compared with 3.6% for males) and young women aged 20-24 are up to 4 times more likely to be infected with HIV than their male counterparts (21% of young women compared with 5% of young men).24

Young men often conform to traditional notions of masculinity by engaging in multiple concurrent partnerships, which increase transmission pathways. Data suggests that young men aged 15-24 are about five times more likely to have multiple concurrent partners than young women,24 pointing to the need to change behavior before lifetime patterns set in.

The graph below underscores that young women are a critical population to reach in South Africa’s efforts to address the HIV epidemic. It is important to target older partners and raise public awareness about risks associated with intergenerational sex, as well as reach young women directly with youth-friendly prevention, care, and support services. Interventions that prevent and mitigate the effects of sexual violence, such as post exposure prophylaxis, must also be scaled up. Young men benefit from interventions that normalize preventive and gender-sensitive behaviors.24

The graph also shows that HIV prevalence in South Africa is highest among females ages 25-29 and it is likely that the majority of these infections occurred during late adolescence/early adulthood.24 Recently, South Africa has made progress in reducing HIV prevalence among young people aged 15-24 in all but two provinces—likely due in part to increased condom use (87.4% of males and 73.1% of females in this age group reported condom use at last sex).24 It is important for PEPFAR to build on success stories like this while seeking to address remaining knowledge gaps (e.g., fewer than half of youth aged 15-24 know how to effectively prevent HIV) through interventions such as age-appropriate comprehensive sexuality education.27 Furthermore, 2.5% of children aged 2-14 are living with HIV, in addition to 8.7% of those aged 15-24,25 therefore it is critical to reach YPLWH with skills-based secondary prevention interventions while ensuring access to youth-friendly SRH, HIV care, and treatment services.

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Kenya

Kenya is home to 12 million young people.2 HIV prevalence among youth aged 15-24 is lower than the national average (1.2% compared to 4.6% for males and 5.9% compared with 8.7% for females2), however roughly one-third of all new infections (29%) occur among this population.29 Like South Africa, the high prevalence among women aged 25-29 (see graph below) points to the need for concerted prevention efforts targeted at younger age groups.

Evidence suggests that unprotected heterosexual sex and multiple concurrent partnerships are the dominant drivers of HIV incidence in Kenya.30

- More than one quarter of young men initiate sex before age 15, compared to 14% of women.30
Young men are also seven times more likely to have multiple concurrent partners than their female peers (11.3% compared with 1.6%).\textsuperscript{9} This mirrors the situation of young men in South Africa, as HIV risks for young men and their partners intensify with early sexual initiation and exposure to a larger number of partners.

As in South Africa, the Kenyan HIV epidemic reflects pervasive gender disparities:

- Young women aged 15-24 are four times more likely to be infected with HIV than their male peers (6.1% versus 1.5%).\textsuperscript{32}
- Only 37% of young women aged 16-20 are in school, compared to 51% of young men—an important fact as school attendance positively impacts age of sexual debut.\textsuperscript{9} However, studies have also cited sexual coercion by male teachers and other gender inequalities at school as significant risk factors for young Kenyan women.\textsuperscript{27}
- Transactional sex, due to poverty, and sexual violence are commonplace: 16% of females aged 15-19 report having sex in exchange for money, gifts, or favors, and over 25% of females aged 15-29 report experiencing some type of violence.\textsuperscript{1,9}
- Against the backdrop of gender inequalities and threats of violence, condom use remains low: only 8.5% of young women aged 15-24 compared with 39.4% of young men report condom use at last sex.\textsuperscript{9,29}

The evidence-based prevention, care, and treatment interventions suggested for South Africa should similarly be scaled up in Kenya. Additional efforts are needed to increase preventive behaviors such as use of condoms and counseling and testing services. Potential approaches include peer education, social marketing, and the use of mass media. Gender interventions that target the community at large and shift norms are also essential to reduce the underlying vulnerability of young women.

Despite the fact that young people represent an important group within HIV prevention efforts, the recent National AIDS Control Program and UNGASS country reports noted that:

- less than 5% of HIV prevention resources are dedicated to youth programs,
- effective interventions targeting sexually active youth are few, and
- cross-program coordination is minimal.\textsuperscript{29,30}

To meet the prevention needs of young people more effectively, substantial shifts in budget allocations and programming priorities must be made.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Kenya_HIV_prevalence_by_age_and_sex_2003.png}
\caption{Kenya: Estimated HIV prevalence, by age and sex (2003)}
\end{figure}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
Age & Males & Females \\
\hline
15-19 & 1.0 & 1.5 \\
20-24 & 2.0 & 2.5 \\
25-29 & 3.0 & 3.5 \\
30-34 & 4.0 & 4.5 \\
35-39 & 5.0 & 5.5 \\
40-44 & 6.0 & 6.5 \\
45-49 & 7.0 & 7.5 \\
Total & 14.0 & 16.0 \\
\hline
\end{tabular}
\caption{Estimated HIV prevalence by age and sex (2003)}
\end{table}


\textsuperscript{1}Violence is defined as any physical, emotional, or sexual violence. Among all adult women in Kenya, 16% reported experiencing sexual violence.
Vietnam

There are approximately 27 million young people in Vietnam. Given the late age of sexual debut in Vietnam (early twenties) and low rates of premartial sex, HIV prevalence is quite low among the general youth population.\textsuperscript{33} However, young people are still central to the HIV epidemic, which is concentrated among FSWs, IDUs, and MSM, a disproportionate number of whom are youth (see Table 1).\textsuperscript{32,36} It is estimated that 62\% of HIV-positive people in Vietnam are between the ages of 20-29, and an additional 8.3\% are between the ages of 10-19.\textsuperscript{34}

Surveys of MARPs in Vietnam have found:

- Up to 35\% of street-based FSWs and up to 49\% of karaoke-based FSWs are young people; there is a 4\% HIV prevalence among all FSWs.\textsuperscript{36}
- Between 15-53\% of IDUs are young people, with a wide variation by city/state. HIV is hyperendemic among IDUs: national prevalence stands at 23.2\% and two provinces report a prevalence of 59\% or higher.\textsuperscript{35,36}
- 58-78\% of MSM in Ho Chi Minh City and Hanoi are young people. HIV prevalence among MSM in the two cities is 5\% and 9\% respectively.\textsuperscript{36}
- Concurrent high-risk behaviors are common. Many MSM and FSWs report injecting drugs and IDUs and MSM report paying for and/or selling sex. Condom use remains low in all groups.\textsuperscript{36}

In Vietnam’s concentrated HIV epidemic, the greatest potential for reducing HIV transmission lies in targeting young MARPs with a two pronged approach: in the long term, addressing the risk factors that lead young people into these high risk activities, and in the short term, promoting harm reduction among those engaged in high risk behaviors. Given that drug use, sex work, and homosexuality are highly stigmatized in Vietnam, a strong focus should be placed on reducing stigma that undermines young MARPs access of prevention and other needed services. Lastly, YPLWH must receive youth-friendly secondary prevention, treatment, and support services in order to reduce new infections.

India

At 331 million, young people aged 10-24 make up 30\% of India’s population.\textsuperscript{2} Although the epidemic is primarily concentrated among FSWs, IDUs, MSM, and their partners,\textsuperscript{4} young people comprise a significant proportion of these groups, as summarized in Table 2. As in Vietnam, concurrent risk behaviors among MARPs amplify HIV transmission rates.

Available data shows that:

- 25\% of FSWs are under 25 years of age and 32\% of FSWs began sex work when they were aged 18 or younger. More than 25\% of FSWs reported inconsistent condom use with clients.\textsuperscript{37,38}
- Up to 58\% of IDUs are young people, with wide variation by city and state. Almost one third of IDUs report starting injection drug use before the age of 25.\textsuperscript{38}

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\begin{tabular}{|c|c|c|}
\hline
Group & Estimated HIV Prevalence (%) & % Age 25 or Younger \\
\hline
FSWs & 4.2\%\textsuperscript{35} & 21.8-34.8\% (street)\textsuperscript{36}  \\
& & 30.2-49.3\% (karaoke)\textsuperscript{36} \\
IDUs & 23.2\%\textsuperscript{35} & 15-53\%\textsuperscript{36} \\
MSM & 5\%-9\%\textsuperscript{36} & 58-78\%\textsuperscript{36} \\
\hline
\end{tabular}
\caption{Vietnam: Most At-Risk Populations (MARPs)}
\end{table}

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\begin{tabular}{|c|c|c|}
\hline
Group & Estimated HIV Prevalence (%) & % Age 25 or Younger \\
\hline
FSWs & 6.63\%\textsuperscript{4} & 24.6\%\textsuperscript{37} \\
FSW Clients & n/a & 28\% or more\textsuperscript{37} \\
IDUs & 11.44\%\textsuperscript{4} & 9.1-58.3\%\textsuperscript{38} \\
MSM & 8.1\%\textsuperscript{4} & 25\% or more\textsuperscript{38} \\
\hline
\end{tabular}
\caption{India: Most At-Risk Populations (MARPs)}
\end{table}

\*Data is from two cities; nationally representative data not available.
- Over 25% of MSM are young people and in many cities over 50% of MSM report first sex with a male partner before the age of 19. Many MSM are married to and/or living with female partners, which creates a bridge for HIV transmission to women and children.\textsuperscript{38}
- Concurrent high-risk behaviors are common. 23% of FSWs and up to 60% of MSMS report injecting drugs and up to 56% IDUs have exchanged sex for money or drugs.\textsuperscript{37,38}

Like Vietnam, primary HIV prevention efforts must be made to identify and reach young people most at risk for injecting drugs and engaging in sex work before they initiate these behaviors. Young MSM and the youth in India’s transgender community also require unique attention, with culturally relevant interventions that address different sexual practices and HIV risks among MSM identity subgroups.\textsuperscript{39} Evidence-based secondary prevention approaches for FSWs have demonstrated success in reducing HIV transmission in Thailand, Cambodia, and south India by emphasizing education, condoms, sexual health, empowerment, and solidarity. Similar interventions should be expanded, incorporating best practices from youth-oriented programs.\textsuperscript{40-42} Opportunities may exist to address co-existing high-risk behaviors by integrating sexual health interventions and harm reduction programs.

**Conclusion**

Adolescence is a time when young people are forming lifelong attitudes and behaviors—making this a critical time to introduce HIV interventions that promote healthy behaviors.\textsuperscript{7} A rich and growing evidence base offers a wealth of proven and promising approaches to HIV prevention, care, and support for youth.\textsuperscript{40,41} For maximum impact, HIV/AIDS interventions must reach people before the point of infection and address the macro-level factors that exacerbate young people’s vulnerability to HIV (e.g., poverty, gender inequality). In its second round, PEPFAR must promote integrated interventions that reach young people and emphasize primary and secondary prevention, sexual risk reduction, and harm reduction within its programs. Evidence-based approaches in generalized epidemic settings include comprehensive, skills-based sexuality education, a package of youth-friendly services, peer education, the use of mass media to disseminate HIV prevention messages, and social marketing of condoms.\textsuperscript{41,42} In concentrated epidemics, programs must target youth most at risk for using drugs and engaging in sex work before they initiate these behaviors. Secondary prevention and harm reduction interventions also show promise. Particular attention should be given to young MSM, as this population is often disenfranchised and highly vulnerable to HIV infection due to unprotected anal sex.\textsuperscript{43} Best practices to reach young MARPs include peer-based programming, social marketing, empowerment of disenfranchised groups, and provision of youth-friendly mobile HIV testing, mental health, and addiction treatment services.\textsuperscript{44-46}

Although HIV/AIDS data in many countries is becoming increasingly sophisticated, many gaps remain—especially among data specific to young people. Virtually no reported data on MARPs is stratified by age and only a minimal body of literature documents proven interventions for addressing their needs. Obtaining data on HIV incidence is extremely challenging, and incidence models rarely provide age-disaggregated estimates that could improve the effectiveness of intervention planning and targeting of resources. To maximize impact in improving health outcomes and cost efficiency, we need a more nuanced understanding of how HIV risks and vulnerability break down by age within MARPs, and how the needs of young IDUs, FSWs, and MSM differ from their older counterparts. PEPFAR can close these gaps by supporting primary research, needs assessment, and program monitoring and evaluation initiatives.

### Key Recommendations for PEPFAR Programs

- Sustain a focus on young people, while recognizing that the needs and priorities will vary depending on country context.
- Scale up evidence-based interventions for young people (e.g., comprehensive sexuality education).
- Disaggregate program data by age and sex.
- Support data collection on HIV incidence as well as research and data collection on most-at-risk youth, to better pinpoint prevention efforts.
- Support youth-friendly care, treatment, and support services for YPLWH.
National governments, funders, and NGOs are placing increased emphasis on interventions that are tailored to the unique context of HIV in each country, based on lessons learned and evidence of effective approaches. In both generalized and concentrated epidemic settings, data clearly show that young people are key to the success of global HIV prevention efforts. Young people play a central role in advancing social and economic development around the world. If we fail to equip the current and future generations of young people with the knowledge and skills to prevent HIV transmission, the epidemic will have increasingly devastating ramifications in low- and middle-income countries. As PEPFAR enters a new round, its initiatives must emphasize young people as a vital focal point for HIV/AIDS programming, drawing upon lessons learned from the first round of PEPFAR to ensure cost-effective, evidence-based interventions.

35. Socialist Republic of Viet Nam. Third country report on following up the implementation to the declaration of commitment on HIV and AIDS. Hanoi: Socialist Republic of Viet Nam; 2008.