What HIV Programs Work for Adolescent Girls?

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**Background:** Adolescent girls face unique challenges in reducing their risk of acquiring HIV because of gender inequalities, but much of HIV programming and evaluation lacks a specific focus on female adolescents.

**Methods:** This article, based on a review of 150 studies and evaluations from 2001 to June 2013, reviews evidence on programming for adolescents that is effective for girls or could be adapted to be effective for girls.

**Results:** The evidence suggests specific interventions for adolescent girls across 3 critical areas: (1) an enabling environment, including keeping girls in school, promoting gender equity, strengthening protective legal norms, and reducing gender-based violence; (2) information and service needs, including provision of age-appropriate comprehensive sex education, increasing knowledge about and access to information and services, and expanding harm reduction programs for adolescent girls who inject drugs; and (3) social support, including promoting caring relationships with adults and providing support for adolescent female orphans and vulnerable children.

**Discussion:** Numerous gaps remain in evidence-based programming for adolescent girls, including a lack of sex- and age-disaggregated data and the fact that many programs are not explicitly designed or evaluated with adolescents in mind. However, evidence reinforces bolstering critical areas such as education, services, and support for adolescent girls.

**Conclusions:** This article contributes to the growing body of literature on HIV and adolescent girls and reviews the vulnerabilities of girls, articulates the challenges of programming, develops a framework for addressing the needs of girls, and reviews the evidence for successful programming for adolescent girls.

**Key Words:** HIV, adolescents, women, girls, programming

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**INTRODUCTION**

“I have read about HIV… I think the young girls do not have this problem… If I meet somebody whom I don’t know much, I may use a condom, but not with a young girl…” (Tanzanian man, age 36).1

The risks of HIV for adolescent girls have long been recognized.2–4 Approximately 2.1 million adolescents were living with HIV globally at the end of 2012. Approximately two thirds of new HIV infections in adolescents aged 15–19 years were among girls.5 Therefore, identifying key elements that address the different vulnerabilities of adolescent girls is crucial. Yet, programmatic efforts for adolescents have tended to lack specific focus on female adolescents and their needs. Furthermore, evaluations of such programs provide scant sex-disaggregated data, making it difficult to identify successful or promising programming specifically targeted to adolescent girls at risk for HIV. For example, a 2013 systematic review provided evidence of what works for adolescents but did not provide sex-disaggregated results.6 Much of the programming guidance related to adolescent girls has few specifics on what interventions might be applied to do so in ways that meet the needs of adolescent girls.3

Adolescent girls face unique challenges in reducing their risk of acquiring HIV. Appropriate interventions will vary depending on personal circumstances and context, including educational and marital status.

**Age at First Sex and Numbers of Partners**

The majority of girls, ages 10–14, in most countries are not yet sexually experienced; by age 19, many adolescent girls have had sex.7 Gender norms in many societies value sexual ignorance for girls while valuing multiple partnerships and sexual risk taking for boys.5–10

**Education and Knowledge**

Girls globally have a lower level of correct knowledge of HIV than boys and are less likely to attend and complete secondary school, where sex education is more likely to be taught than in primary schools.11,12 Girls are more likely to be illiterate than boys.

**Gender Norms and Coercive Sex**

In countries with the highest rates of HIV, males dominate sexual decision making.13–15 Disparities in gender
adolescent girls may have much sexual debut, age disparate Based on 17 studies, with Overall, more that makes programming for adolescent Speci- it is important, 30 S177 “Female orphans www.jaids.com Supplemental Digital Content HIV Programs for Adolescent Girls fi- nances with unequal access to Image 33x5 to 561x19 facilities with unequal access to AIDS from developing countries th... This article is based on a review of studies and evaluations published between 2001 and June 2013, with a focus on evaluated outcomes for interventions focused on women and girls in developing countries to reduce HIV acquisition and reduce the morbidity and mortality of girls and women living with HIV. The analysis for this article included a subset of articles and reports covering interventions for adolescents that were drawn from the wider review where the full methodology can be found. Overall, more than 150 articles or reports were included in the analysis for this article. Although most of the interventions identified relate to adolescents aged between 10 and 19 years, evidence of effective interventions conducted among adult populations older than 19 years, which could be applicable to adolescent populations aged 10–18 years, have also been included (see Table S1, Supplemental Digital Content, http://links.lww.com/QAI/A522).

RESULTS
Given the multiple influences on the lives of adolescents, from family to community to society, it is important to look beyond the health sector for interventions to reach adolescent girls. The evidence for programming for adolescent girls falls under a range of interventions in 3 areas: (1) to address the enabling environment; increase educational attainment for girls, promote gender-equitable norms, include a focus on adolescents in programs to reduce gender-based violence, and strengthen legal norms to protect adolescent girls; (2) information and service needs of adolescent girls: provide age-appropriate comprehensive sex education, increase knowledge about and access to information and services including condoms and other contraceptives, and expand harm reduction programs to include adolescent girls who inject drugs; and (3) social support: promote caring relationships with adults and provide support for adolescent female orphans and vulnerable children (OVC). Discussion of the results below focuses on the main interventions and highlights 1 study example to demonstrate model programming. A full summary of all interventions and studies is included in Table S1 (see Supplemental Digital Content, http://links.lww.com/QAI/A522).

Enabling Environment
A number of evidence-based interventions to improve the enabling environment have been successful or promising for effectively addressing HIV risk for girls.

Increase Educational Attainment of Girls
Among the structural interventions to reduce the risk of HIV for adolescent girls, the most powerful is to keep girls in school. Specific interventions that have demonstrated
success in increasing educational attainment and are linked to better HIV outcomes include abolishing school fees to enable girls to attend (or stay in) school and providing educational support for orphans. Conditional cash transfers, for example, show promise for enabling girls to stay in school and may result in reduced incidence of HIV. In a randomized control trial, program beneficiaries receiving cash were 3–4 times more likely to be in school at the end of the school year than that in the control group. For program beneficiaries who were out of school at baseline, the probability of getting married and becoming pregnant also declined by more than 40% and 30%, respectively. Challenges to implement this type of intervention include the need for cross-sectoral collaboration and funding. However, some have argued that funds could come from multiple sectors and that this intervention is cost-effective.

**Promote Gender-Equitable Norms**

Promoting gender-equitable attitudes, which should start in childhood and continue during the formative period of adolescence and into adulthood, can reduce the risk of acquiring HIV and reduce the acceptance of gender-based violence. Training, peer and partner discussions, and community-based education that questions harmful gender norms can improve HIV prevention, testing, treatment, and care. Many of the studies supporting this intervention were conducted with adolescent populations. Addressing gender norms requires working with boys and girls, both separately and together. For example, a study of boys and girls, ages 10–14, in Nepal with a curriculum to promote gender equity resulted in a doubling of gender-equitable attitudes concerning gender-based violence by boys and girls in the intervention group, with no changes in the control group. Reaching young men are critically important. The NGO, Promundo, started with Program H to promote more gender-equitable attitudes among young men, resulting in significant increases in male condom use in Brazil and India, significant reduction in use of violence against female partners in India, and significant changes in gender attitudes among young men in Brazil. Improvements in gender norm scale scores were associated with changes in at least 1 key HIV/sexually transmitted infection risk outcome. Building on the experiences of Program H, Promundo started Program M to promote the empowerment of young women, resulting in a significant increase in self-efficacy among young women. Although successful, NGO-led programs such as these are often limited in duration and scope, reaching at most a few thousand participants. Changing gender norms on a national scale would require augmenting these programs with structural interventions at the national level, engaging policymakers and community leaders, along with mass media, to promote equitable gender norms.

**Include a Focus on Adolescents in Programs to Reduce Gender-Based Violence**

Although gender-based violence is a key issue for many adolescents, little programming has been developed and evaluated for adolescents in developing countries. Gender-based violence, which is closely associated with inequitable gender norms, also increases the risk of HIV acquisition. Child sexual abuse is correlated with increased risk of HIV acquisition; therefore, any programs that reduce gender-based violence starting at an early age will help break this multigenerational cycle. UNAIDS has recently adopted incidence of gender-based violence as a key indicator of gender inequality. According to UNICEF, between 5% and 21% of adolescent girls, ages 15–19, reported that they have ever experienced sexual violence. Often, rape is considered justified or inevitable by girls and boys. “A major gap in sex education programs is the need for both girls and boys to understand what constitutes coercive sex.”

Public health campaigns can influence communities so that violence against women becomes unacceptable. Among older adolescents, community-based participatory learning approaches involving men and women can create more gender-equitable relationships, thereby decreasing violence. Training teachers about gender-based violence is a promising strategy to change norms about acceptance of gender-based violence. Microfinance programs, such as the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) in South Africa, are promising interventions that can lead to a reduction in gender-based violence when integrated with participatory training on HIV, gender, and violence and could be adapted for use with older out of school adolescents. At the same time, microfinance programs that do not have a specific component to reduce gender-based violence and promote gender equity can have the unintended effect of increasing gender-based violence.

**Strengthen Legal Norms to Protect Adolescent Girls**

Although evidence on the link between changing legal norms and reducing risk of acquiring HIV or in meeting the needs of women living with HIV has not been found for adolescent girls, it is clear that certain laws can be harmful for adolescent girls. Legislation that requires parental consent for adolescents to access HIV testing can deter adolescents from knowing their serostatus and if HIV-positive, accessing treatment in a timely fashion. Girls in child marriages are at increased risk of violence, acquiring HIV and reduced educational opportunities. Therefore, legislation and enforcement of legislation against child marriage are needed. Impunity regarding rape for girls and women should also be addressed in the laws, legislation, and enforcement, with monitoring for unintended consequences.

**Information and Services**

**Provide Comprehensive Sex Education**

Substantial evidence exists demonstrating that sex and HIV education with certain characteristics before the onset of sexual activity may be effective in preventing transmission of HIV by increasing age at first sex and for those who are sexually active, increasing condom use, testing, and reducing the number of sexual partners. To meet the needs of adolescent girls, age-appropriate sex education should stress equitable gender norms, identify what constitutes coercive sex, and strengthen agency among girls.
It is important to note that school-based interventions alone have not shown impact in reducing HIV incidence, but they have shown beneficial effects on knowledge and reported behaviors, suggesting that sexuality education is necessary for effective HIV prevention but needs to be combined with other interventions including accessible and youth-friendly health services. The quality of sexuality education is as important as its provision; fidelity to successful components must be maintained. Training for teachers to conduct age-appropriate participatory sexuality education, which can improve students’ knowledge and skills, is essential. Comprehensive sexuality education is under-programmed, no developing country was found to have a functioning national-level comprehensive sex education program that meets the needed characteristics. “Even in the face of the HIV/AIDS pandemic, governments have been slow to implement comprehensive sexuality education and even slower to reach the most vulnerable young people.”

Although keeping girls in school is a key intervention, those girls who are not in school also need to be reached with information and services, but no evaluated interventions were found to effectively provide comprehensive sex education outside school settings; however, the need for effective sexuality education for out of school youth has been noted as a gap by many.

**Provide Information and Access to Youth-Friendly Services**

Young people’s needs for services are frequently overlooked in HIV programming. Providing clinic services, which are acceptable and accessible to youth, conveniently located, affordable, confidential, and nonjudgmental, is a promising way to increase the use of clinical reproductive health services, including HIV testing and counseling (HTC). Beginning at sexual debut, promoting condoms through mass media in individual or group sessions, along with skills training, provision of condoms, and motivational education can increase condom use. Condom use remains a critical prevention method, reducing the chance of HIV acquisition by more than 95%, with comparable effectiveness between male and female condoms when used consistently and correctly. Increasing the accessibility and availability of male and female condoms when used consistently and correctly.

HTC services for adolescents are another important need; yet, HTC for women is often in the context of antenatal care, thus missing the needs of young unmarried women. Provision of HTC can help adolescent girls know their HIV status and increase their protective behaviors, particularly among those who test HIV-positive. Yet evaluated interventions are not adolescent-focused. Providing HTC together with other health services can increase the number of adolescent girls accessing HTC. For those adolescents living with HIV, provision of antiretroviral therapy can reduce (but does not eliminate) the risk of HIV transmission. Microbicides are a promising technology under development, and a clinical trial is underway to test the use of pre-exposure prophylaxis among adolescent girls in Kenya who have not been able to negotiate condom use. A survey of 445 young women with access to a no-cost youth-friendly clinic in Maputo City, Mozambique, demonstrated high levels of knowledge to avoid risk of HIV acquisition and low rates of HIV (4%) compared with HIV prevalence (17.3%) in the same city.

Establishing comprehensive postrape care protocols, which include postexposure prophylaxis and emergency contraception, can improve services for all. However, rape of adolescent females, ages 10–19, is underreported, and services for this population are weak.

**Expand Harm Reduction Programs to Include Adolescent Girls**

Comprehensive harm reduction programs, including needle exchange programs, condom distribution, opioid substitution therapy and outreach, HTC, and nonjudgmental risk reduction counseling, can reduce HIV risk behaviors. However, injecting drug use often starts in adolescence and no evaluated interventions were found for this population and the evidence here is based on adult women. In addition, although a conceptual framework exists for gender-sensitive harm reduction programs, only 1 evaluated intervention was found that meets the needs of adult women who inject drugs. A study in Kazakhstan found a comparison between 40 adult couples who had single gender group sessions with female and male partner injection drug users resulted in increased condom use and safe injection practices compared with 40 couples who did not have single gender group sessions. The intervention group had 2 sessions designed to help women anticipate and manage partner’s negative reactions in response to requests to use condoms or not to share needles. This program could be assessed for applicability in an adolescent population.

**Social Support for Adolescent Girls**

**Promoting Relationships With Supportive Adults**

Encouraging communication between adults and young people about reproductive health information can increase protective behaviors among adolescents. A study of 186 girls, ages 12–18, and 183 of their mothers in Uganda found that 75.8% of mothers reported having discussed the issues of sexuality and HIV with their daughters and 67.9% of mothers reported having had their mothers discuss the topics with them. Parents were the major source of information concerning sexuality and HIV/AIDS for young girls. When asked, mothers requested seminars on communication skills to empower them to better communicate with their daughters on matters concerning HIV, AIDS, and sexuality.

Programming to increase and improve communication between adults and children can be built into various interventions. For example, one component of the IMAGE study included encouragement of loan holders to engage with
young people in their households about sexuality issues through (1) teaching the women participants about HIV, (2) allowing the women to recognize their responsibility in protecting young people from HIV, and (3) giving the women participants guidance in changing social taboos and norms. Although women were initially resistant, saying that they had talked to their children about AIDS, by the end of the program they saw value in learning how to more effectively engage with their children. They spoke to children about sexuality issues significantly more often, and rather than “vague admonitions,” they provided concrete guidance to young people; 97.6% of the women who communicated with children about sexuality discussed condoms whereas 58.2% discussed HIV testing. Young people who lived with the women participants generally wanted to discuss sexuality with their parents. The study lacked sex-disaggregated data of the young people, a missed opportunity, but did note that some women found it easier to talk to their daughters than their sons.196

Support for Adolescent Female OVC
Since orphans face particular HIV risk, programs that provide community-wide cash transfers, microenterprise opportunities, old-age pensions for the caregivers of OVC, or other targeted financial and livelihood assistance can be effective in supporting orphans.199–200 For example, a randomized clinic trial studied 268 adolescent orphans in their final year of primary school in Uganda found that at 10 months after intervention, adolescents who had participated in an economic empowerment intervention had significantly better self-esteem and self-rated health measures than the control group. Girls reported greater increases in self-esteem than boys and were less likely to intend to engage in risky sexual behaviors. Adolescents in the intervention group received 12 workshops on economic security and empowerment over the course of 10 months.199

Successful interventions for OVC include psychological counseling and mentoring, which may improve their psychological well-being.209–212 A school-based peer-group support intervention with adolescent OVC found that peer-group interventions when led by teachers and complemented by health care check-ups significantly decreased anxiety, depression, and anger among the intervention group.209 However, the evaluation of the intervention did not report findings by sex; therefore, it is not possible to say if the intervention was equally beneficial to girls and boys.

CONCLUSIONS
Given the epidemiological data showing the elevated HIV prevalence among girls that occurs during adolescence, as compared with boys, and the known distinct epidemiological and social vulnerabilities of girls, efforts to ensure that programming for adolescents takes the unique needs of adolescent girls into consideration and that some programs specifically for adolescent girls are warranted. Overall, the evidence does support programming specific interventions that address the enabling environment to keep girls in school, promote gender equity, and reduce gender-based violence, as well as the health information, service, and social support needs for adolescent girls.

This article has shown that there is evidence that could be used to guide programming to address the needs of adolescent girls and build their resilience and that serious gaps in programming continue to exist, including missed opportunities to understand the differential effects of programming for adolescents through sex-disaggregation of data in evaluations, or the effects of the legal environment where, despite the absence of a clear link to HIV risk among adolescent girls, it is evident that certain laws, such as those requiring parental consent for services or protecting child marriage, can be harmful for them. These and many other gaps in programming for adolescent girls must be addressed if we are to turn the tide of the increasingly feminine face of HIV.

REFERENCES


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