HIV prevention among adolescent girls and young women

Putting HIV prevention among adolescent girls and young women on the Fast-Track and engaging men and boys

Contents

Introduction

Why this publication?

The number of new HIV infections among adolescent girls and young women in sub-Saharan Africa remains exceptionally high. In 2015, 450 000 [380 000–530 000] new infections occurred among adolescent girls and young women aged 15 to 24 years, which translates into approximately 8600 new infections per week *(1)*. UNAIDS, its Cosponsors and its partners—including civil society and young people themselves—consider it a top priority to accelerate HIV prevention programming among adolescent girls and young women in line with respecting, protecting and fulfilling their rights and promoting gender equality.

Preventing new infections among adolescent girls and young women requires a combination of approaches that also reach out to men and adolescent boys. While there is guidance on adolescents and youth *(2–4)*, including girls and young women *(5)*, there is no consolidated guidance to specifically support countries in developing effective HIV prevention programme packages for reducing HIV incidence among adolescent girls and young women in high-incidence settings.

Who is this publication intended for?

This programming guidance is meant to inform programmes that aim to reduce HIV infection among adolescent girls and young women in countries and locations where HIV incidence is high among adolescent girls and young women and where HIV is primarily spread through heterosexual

transmission. This report primarily is for policy-makers, planners and implementers of HIV prevention programmes across multiple sectors, including organizations led by young people. The document also is useful for experts in wider health and social sector programmes, including health workers and teaching staff, or any other professionals who can integrate dimensions of HIV prevention into their area of work.

Why adolescent girls, women, adolescent boys and men?

The programmes described in this document aim to reduce HIV incidence among adolescent girls and young women. The epidemic dynamics, however, require programming that cuts across age and gender. New HIV infections among adolescent girls and young women are substantially higher than among males of the same age because HIV is more commonly acquired from male sexual partners who are a few or several years older. Gender inequality also disproportionately affects girls and women, but addressing it requires working with both women and men to consider not only unequal power dynamics, but also risk practices and underlying social and gender norms. Several trials of biomedical and other combination HIV prevention programmes that had an effect on biological outcomes have focused on both women and men.[1] HIV prevention and sexual and reproductive health and rights (SRHR) programmes for adolescent boys and men should also be available, and guidance is under development *(6)*. Guidance also is under development to make voluntary medical male circumcision (VMMC) a gateway to health for adolescent boys and young men *(7)*.

What is the overarching goal of HIV prevention for adolescent girls and young women?

The United Nations (UN) Political Declaration on Ending AIDS adopted in June 2016 calls for reducing new HIV infections to fewer than 500 000 per year by 2020, and it sets a specific target to reduce new HIV infections among adolescent girls and young women aged 15 to 24 years to fewer than 100 000 by 2020. The targets set by 2016 Political Declaration require that by 2020 there is a 75% reduction of the registered new infections documented in 2010.

Achieving this target demands dramatic acceleration of action and expanding of programmes for adolescent girls and young women. In line with the global target, this guidance document will focus on adolescent girls aged 15 to 19 years and young adult women aged 20 to 24 years. Specific programme areas, however, will include actions for adolescent girls aged 10 to 14 years and young adult women aged 25 to 29 years. More specific guidance for the country-level focus of different programmes is provided later in this document.

[1] Trials with effects on biological outcomes—such as HIV or other sexually transmitted infections (STIs)—that focus on both women and men include the Stepping Stones and SHARE trials described later in this document, as well as biomedical trials of pre-exposure prophylaxis (PrEP) for heterosexual individuals and the HPTN0052 treatment-as-prevention study that was conducted among serodiscordant couples.

Why rights, empowerment and gender equality?

The fact that adolescent girls and young women are substantially affected by the HIV epidemic is partially due to gender roles prevalent in society, to social norms that affect them, and to their limited access to education and resources, all of which prevent adolescent girls and young women from making essential decisions about their health and lives. Harmful laws and practices in relation to early marriage, early pregnancy and lack of access to confidential sexual and reproductive health services prevent adolescent girls and young women from obtaining essential HIV prevention information and services. Respect for adolescent autonomy and decision-making, providing empowerment, and changing gender norms and laws can enhance access to—and ability to use—HIV prevention services among adolescent girls and young women *(6)*.

What this guidance is and what it is not

This guidance provides concepts and examples on how to do the following:

- **Understand** the epidemic situation of adolescent girls and young women in the country context *(where to focus—identify what are the underlying determinants of the epidemic).*
- **Design** effective responses for adolescent girls and young women *(what programmes are effective, what to do—define goals and strategy).*
- **Deliver** programmes for adolescent girls and young women *(how to do it—implement at scale and overcome barriers).*
- **Measure and sustain** programme impacts for adolescent girls and young women *(how to improve based on lessons learned).*

This document will not provide detailed technical guidance on programme areas such as condom promotion, HIV testing services (HTS) or PrEP; that information is available elsewhere *(8–10).* This publication also cannot replace the detailed existing guidance on key populations *(11),* including young key populations, such as young sex workers and sexually exploited adolescents *(12, 13),* people who inject drugs *(14),* transgender people *(15)* and gay men and other men who have sex with men *(16).*

Understanding geographical patterns and HIV risk among adolescent girls and young women

Priority countries and settings: where to Fast-Track

According to 2015 UNAIDS estimates, the vast majority of countries where HIV prevalence among adolescent girls and young women aged 15 to 24 years exceeds 1% are in sub-Saharan Africa (with the exception of the Bahamas) *(17)*. Outside of sub-Saharan Africa, HIV prevalence in adolescent girls and young women exceeds 1% mostly among subpopulations (such as sex workers and communities with high drug use). Achieving reductions in new HIV infections among young key populations is essential to achieving the global target of fewer than 100 000 new HIV infections among adolescent girls and young women aged 15 to 24 years.[2]

Even within sub-Saharan Africa, there are large differences in epidemics among young women. For instance, HIV prevalence among young women aged 15 to 24 ranges from below 0.1 % in Senegal to 16.7% in Swaziland (2015) *(17)*.

High HIV prevalence among young women aged 15 to 24 years can serve as a proxy for HIV incidence in the absence of other data.[3] Another option is to use modelled estimates of HIV incidence among young women, as they show variation between and within countries by age and location.

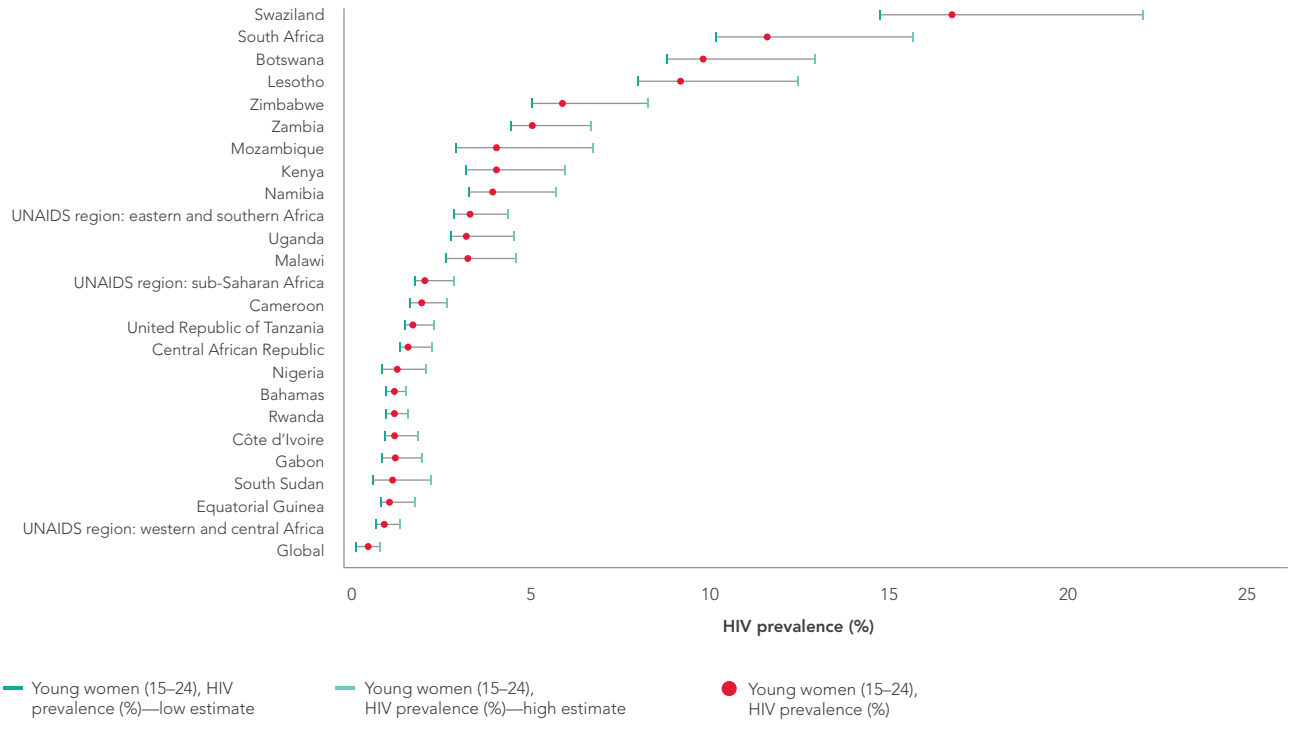
[2] Programmes for key populations outside of sub-Saharan Africa need to include and address the specific needs of adolescent girls and young women to ensure that they can access services for female sex workers and women who inject drugs, as well as those for wider health and social services. In order to keep this publication focused—and considering that other guidance exists—the emphasis of this guidance note is on programmes for epidemic settings where HIV incidence also is high beyond key populations.

[3] One limitation of using data on HIV prevalence is that a proportion of young women may have acquired HIV through mother-to-child transmission and survived into adulthood. This proportion can be a majority in the cohort of those aged 10 to 19 years. This limitation also affects trend data, because the proportion of infants born HIV-positive who have survived into adolescence will have changed over time, based on levels of HIV prevalence among pregnant women at the time of birth and the availability of services for prevention of mother-to-child transmission.

As illustrated in Figure 2, the distribution of new HIV infections between women aged 15 to 19 years, 20 to 24 years and 25 to 29 years varies between countries. In most countries, the number of new HIV infections is highest among young adult women aged 20 to 24 years. In Kenya, South Africa and Swaziland, a large number of new HIV infections also are estimated to occur among adolescent girls aged 15 to 19 years, while in other countries (such as Nigeria, Uganda and Zimbabwe), larger numbers of new infections are estimated to happen among women aged 25–29 years.

Figure 1

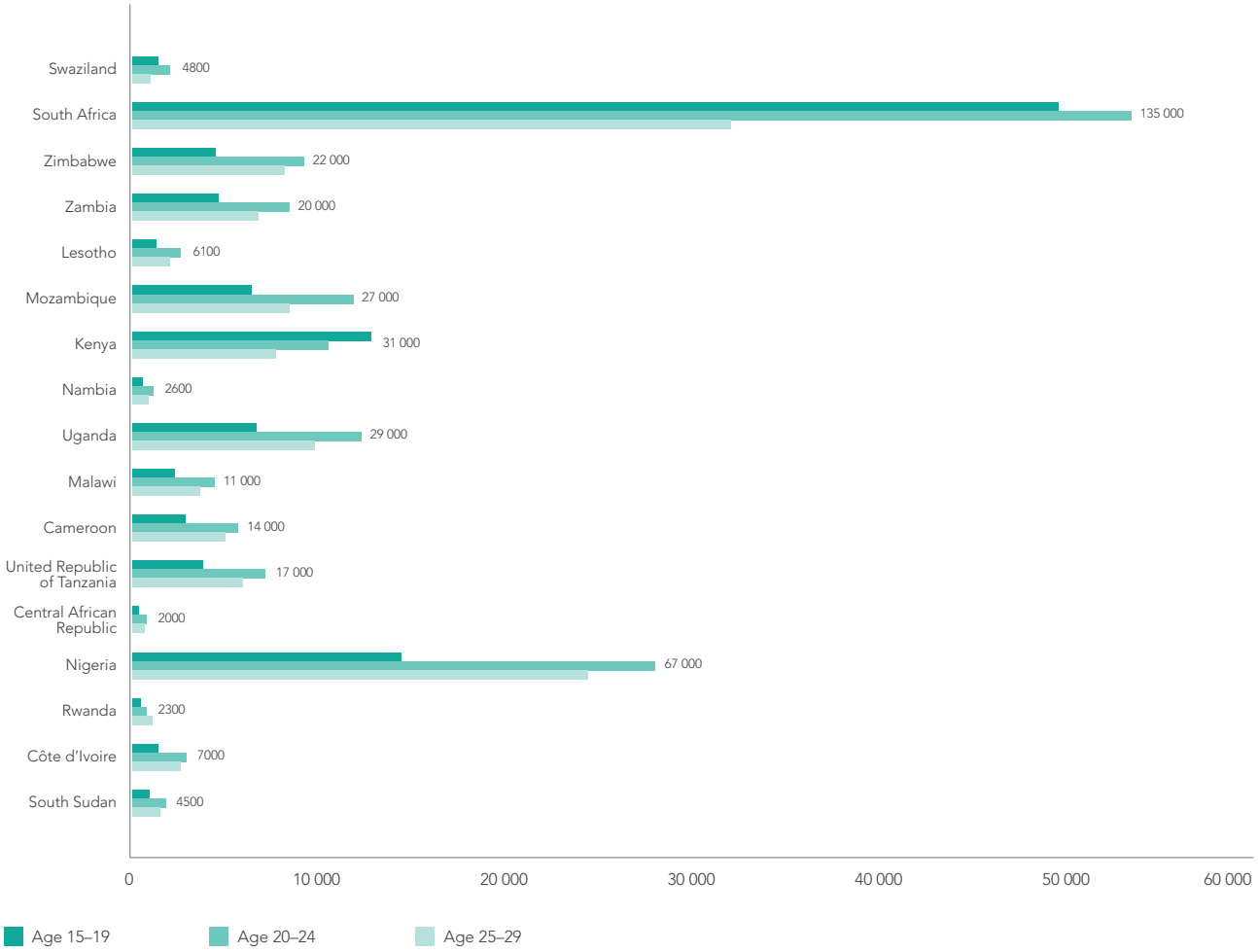
Countries with HIV prevalence among young women exceeding 1%



Source: 2016 UNAIDS estimates.

Figure 2

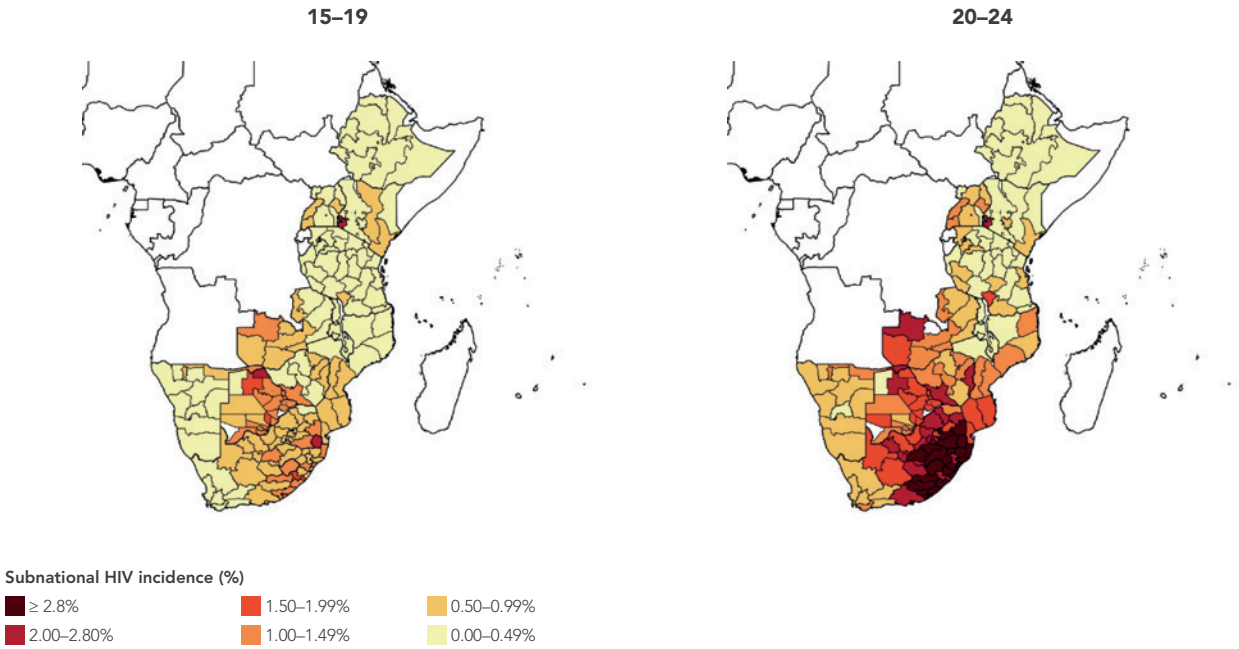
Number of new HIV infections among adolescent girls and young women, by age



Source: 2016 UNAIDS estimates.

Figure 3

Map of HIV incidence (per cent) among young women in selected countries



Source: UNAIDS 2016 estimates

Triangulation of available HIV incidence and prevalence data—as well as estimates—suggests that priority areas for expanding prevention for adolescent girls and young women should include the following:

- As a top priority region, the entire area between the cities of Johannesburg in the west, Maputo in the north and Port Elizabeth in the south. This includes parts of South Africa, southern Mozambique, and the whole of Swaziland and Lesotho.
- The majority of other areas in high HIV prevalence countries in southern Africa, including other parts of South Africa and Mozambique, as well as Botswana, Malawi,

Namibia, Zambia and Zimbabwe, taking into account subnational HIV epidemic dynamics.

- Substantial parts of eastern Africa—particularly within Kenya, South Sudan, Uganda and the United Republic of Tanzania—while considering geographic prioritization within these countries.
- Selected geographic areas in other parts of Africa—including Angola, Cameroon, Central African Republic, Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Guinea-Bissau and Nigeria—in which adolescent girls and young women are highly affected.
- Very specific locations outside of Africa with high HIV prevalence among young women.
- In all settings globally, the needs of young sex workers and sexually exploited adolescents or people who use drugs should be addressed in line with the relevant programming guidance for young key populations.

Which subpopulations to focus on?

What matters for programming is how HIV is transmitted, who is newly acquiring HIV and when, and where and by whom HIV is being transmitted. Among adolescent girls and young women in countries and settings with high HIV prevalence, most HIV acquisition is through heterosexual sex *(18)*.

Figure 4 uses data from South Africa to show how HIV incidence data can be used to identify priority populations. It is important to analyse the epidemic comprehensively (not just data for young populations) for several reasons: groups interact, some types of disaggregated data (particularly for HIV incidence) may not be available, and synergies with populations beyond the 15–24 age group need to be explored.

The South Africa data suggest that new infections occur among adolescent girls below 15 years of age, but HIV incidence is substantially higher in the 15–24 age group. Programmatically, this will require different strategies for adolescent girls in the 10–14 age group, the 15–19 age group and young adult women aged 20–24. HIV incidence rates are highest in informal urban settlements, but larger numbers of new HIV infections occur among people who live in formal urban settlements with a larger proportion of the urban population.

In South Africa, HIV incidence rates are higher among unmarried women, including those who recently formed a new relationship or those who are living with their partner but are not married *(19)*. HIV incidence among women who are already married is substantially lower in South Africa. The same pattern was found in Swaziland, with substantially higher HIV incidence rates among unmarried women and men. In both countries, relatively few adults of reproductive age are married *(20)*. Patterns may be substantially different in countries with higher marriage rates, but national HIV incidence surveys are not available.[4]

[4] Also see Figure 5 (below).

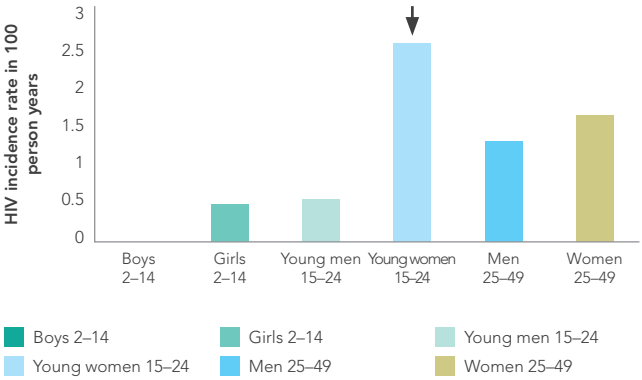
Figure 4

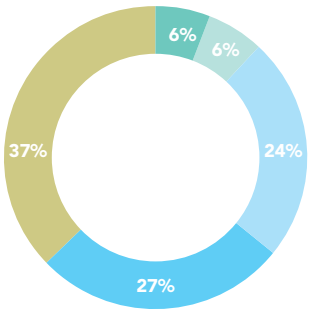
Where to focus: using HIV incidence data to identify populations at high risk—the example of South Africa

Where to start
Highest HIV incidence rate

Where to get impact at scale
Contribution of group to the total number of new HIV infections

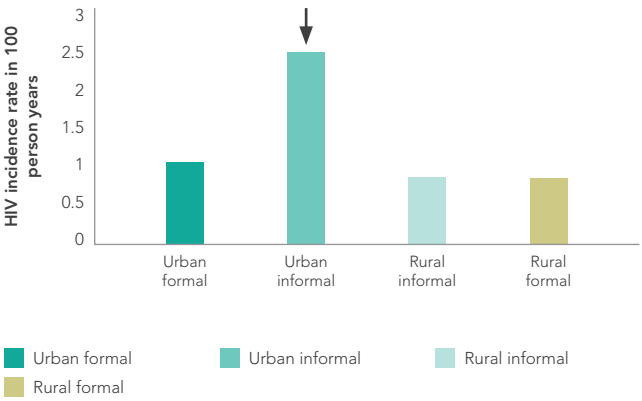
(a) By age and sex: HIV incidence highest among young women aged 15–24 years, but large numbers of new infections among adult populations

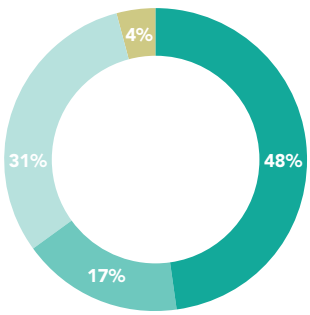




New infections by age and sex (in % of total)

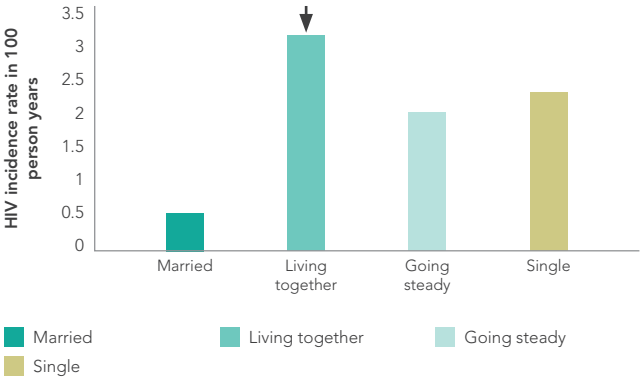
(b) By residence: all urban areas important plus key locations in rural areas

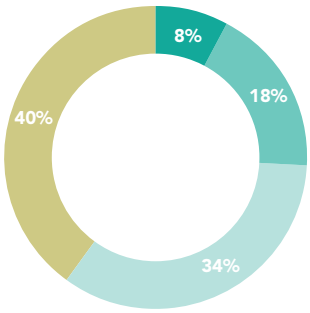




New infections by residence (in % of total)

(c) By relationship status: focus on singles and their transition into informal relationships





New infections by relationship status (in % of total)

Source: Based on Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Zungu N et al. South African national HIV prevalence, incidence and behaviour study, 2012. Cape Town: HSRC Press; 2014.
Note: For the pie chart on number of new infections by relationship status, new infections were projected using incidence rates and the number of respondents in each group. All charts represent a breakdown of incidence rates and new infections in the total population. Disaggregation for key populations such as sex workers and men who have sex with men was not available.

The example illustrates several key points to consider during analysis:

- It is essential to look at both HIV incidence rates *and* absolute numbers of new infections disaggregated by age, sex, marital status, residence and other demographic factors.
- It is critical to analyse the HIV situation of adolescent girls and young women in the context of other subpopulations.
- It is necessary to look beyond rigid age-related definitions of adolescent girls and young women. The data from South Africa suggest that in 2012, 24% of new infections were among women aged 15 to 24, and another 6% were among men within this age group. Young women are newly acquiring HIV at younger ages than men: many young women aged 15 to 24 may acquire HIV from men aged 25 to 34, while many of these men acquired HIV from women aged 25 to 29 *(21)*.
- This also means that although the HIV incidence rate is highest among young women aged 15 to 24 years, a larger proportion of new infections occurs in older women and men. In Swaziland, a second peak in HIV incidence among women aged 35 to 39 years was documented *(20)*. Although adolescent girls and young women remain the highest priority, achieving overall HIV incidence

targets in African epidemics therefore also requires strategies for adult populations. A mix of delivery channels is needed, such as through schools for adolescents and through community- or health facility-based programmes for both young people and adults, although with different communications and packages of services.

- In South Africa, few new infections were among married women and men; single people and those in new and other non-marital relationships account for the vast majority of new infections. This suggests that these relationship types, which are common among young people, continue to account for a large share of new infections beyond age 24 in these countries. Other countries may experience substantially different patterns. For example, in contexts of early marriage, married adolescents may be at higher risk than those who are not married and sexually active *(22)*.
- National HIV incidence surveys are not available in most countries. Where national HIV incidence surveys are not available, incidence data from cohort studies might be available or mathematical models may be applied to estimate HIV incidence among different groups. Using only HIV prevalence data for understanding HIV transmission patterns among young women is possible, but it has substantial limitations.[5]

Which factors influence high HIV incidence among young women?

It is critical to understand which factors drive HIV acquisition and transmission by and to adolescent girls and young women. Many of these factors are interrelated with each other and with factors relevant to adult populations. This implies that the high HIV incidence of adolescent girls and young women cannot be explained simply by their own behaviour and biology, but that it must be interpreted in the entire epidemic context. The causes of risk, which have been analysed elsewhere, can be grouped into behavioural, structural and biological factors *(21, 23–27)*.

Behavioural factors

Behavioural factors related to HIV risk among adolescent girls and young women involve individual and relational factors; in other words, they are linked to the behaviour of both young women and their male partners. Behavioural factors are closely linked to social and gender norms on relationships, sexuality and marriage, as well as structural factors (such as population mobility and gender inequality).

- **Age-disparate sex.** The age of sexual partners is a key factor that contributes to HIV incidence being substantially higher among adolescent girls and young women than among males of the same age. The majority of women are in age-disparate

[5]Conclusions on HIV transmission derived directly from HIV prevalence data may be confounded by age and other variables. For example, HIV prevalence among married young people may be higher, but this may not mean that HIV incidence in this group is higher, because those aged 15 to 24 years who are married may have been infected before marriage. They also, on average, will be older and have had a longer period of sexual activity than unmarried women aged 15 to 24 years.

relations with men who are between one and 10 years older *(28)*. In such relationships, not only is there a higher likelihood of older men being already infected, but also of unequal power dynamics within the relationship that may prevent safer sex.

- **Multiple partnerships.** Having a greater number of sexual partners—or having a partner with a history of having multiple partners—is consistently associated with higher levels of HIV acquisition in eastern and southern Africa. Demographic Health Surveys (DHS) and recent national HIV incidence surveys confirm this association *(19, 20, 29, 30)*. The risk of acquiring HIV applies to adolescent girls and young women with multiple partnerships, as well as to those with male partners who have (or have had) multiple partners. In that sense, any new non-regular or regular relationship may connect adolescent girls and young women to a wider sexual network.
- **Sex work and sexually exploited adolescent girls.** HIV incidence among young sex workers and sexually exploited adolescent girls remains high in many settings in sub-Saharan Africa *(31)*. It is particularly important that young sex workers and sexually exploited adolescent girls are reached early with programmes, since a significant proportion of new infections may occur soon after they begin to sell sex *(32)*.
- **Transactional sex.** Transactional sexual relationships are non-marital, non-commercial sexual relationships based on an assumption that sex will be exchanged for material support or other benefits *(33)*. A review suggests that women who engaged in transactional sex were more likely to be HIV-positive, and that adolescent girls and young women engage in these relationships for three main groups of reasons: accessing basic needs, increasing their social status and receiving material expressions of love from male partners *(33)*.
- **Early sexual debut.** A systematic review found associations between early sexual debut and HIV explained by a combination of factors: early onset of sex itself, an effect on later engagement in risky sexual behaviours and biological factors. Even in contexts with relatively late age of debut (like Zimbabwe), major HIV epidemics among young women have been observed *(146)*. In a multicountry study, over 30% of women who reported first sex before the age of 15 years described that sexual experience as being forced *(34)*.
- **Gaps in knowledge and limited personalized risk perception.** Although knowledge of basic prevention methods is relatively high in priority countries, there are still considerable gaps in comprehensive basic knowledge among adolescent girls *(24)*, young women, and the population overall *(30)*. Knowledge of specific risk factors (such as transmission in sexual networks or the risk of age-disparate sex and anal sex), of newer biomedical prevention methods (such as PrEP), or of links between HIV and gender-based violence, is likely to be lower. Although people understand that the population-level risk of HIV is high in eastern and southern Africa, there still are gaps in personalized risk perception. In one survey, a significant portion of young HIV-positive

adults who did not yet know their HIV status did not perceive themselves to be at higher risk of HIV *(35)*. Similarly, young women at high risk did not consistently use PrEP due to low risk perception, while high risk perception was shown to be associated with higher use of PrEP *(36)* and more frequent use of condoms among adolescents (between two and five times more frequent) *(37)*.

Biological factors

As with behavioural factors, biological factors have an individual and a relational dimension. HIV acquisition among adolescent girls and young women is influenced both by their own biological susceptibility and by biological factors related to male partners. HIV incidence and per-act transmission rates among adolescent girls in southern Africa are exceptionally high, suggesting that biological factors (in combination with behavioural and structural patterns) enhance HIV acquisition in the region *(38)*:

- **Biological susceptibility of women.** The per-act transmission risk for women during vaginal sex has been found to be higher than for men in most (but not all) studies *(39)*.[6] The higher susceptibility of women can be explained by a number of factors: the ability of HIV to pass through the cells of the vaginal lining, the larger surface area of the vagina compared to the penis, increased mucosal HIV exposure time, the potential for micro-abrasions and tears of the vagina or cervix, the higher concentration of HIV in semen than vaginal fluids, the increased expression of HIV co-receptors in cervical cells (compared to foreskin cells), and high levels of activation of the immune cells in the female genital tract (*21, 40)*.
- **Biological susceptibility of adolescent girls.** In addition to factors explaining female susceptibility, adolescent girls may be at increased risk because of other factors. In the immature cervix, a greater proportion of genital mucosa is very susceptible to HIV. Relatively high levels of genital inflammation and a vaginal microbiome perturbed by bacterial vaginosis also could enhance HIV acquisition *(21)*.
- **High HIV viral load among male partners.** Due to the lower uptake of antiretroviral therapy among men, it is likely that in most countries, fewer men than women are virally suppressed as suggested by studies in different settings. *(41, 143)*. In addition, a review of data on viral load suggests that average levels of community viral load are particularly high in eastern and southern Africa, which may relate to coinfections and potentially to other factors, as well *(42)*.
- **Low prevalence of male circumcision.** This is associated with higher HIV prevalence in sub-Saharan Africa (*43),* and there is compelling evidence that VMMC reduces sexual HIV transmission from females to males *(44–46)*. While there is no conclusive evidence that male circumcision reduces HIV transmission from men to women, models

[6] Comparison of women's to men's biological susceptibility to HIV during heterosexual sex is influenced by circumcision status of men, which reduces men's susceptibility.

have shown that despite the increased risk of transmission during the healing period, young women would benefit indirectly from increased coverage of VMMC because of the reduced HIV prevalence among men *(47)*.

- **Harmful practices.** Susceptibility can be further exacerbated through harmful intravaginal practices like the use of substances to dry the vagina or intravaginal washing with soap *(48)*. Sexual practices, like anal sex, which was reported to occur among adolescents in the context of limited HIV risk perception or virginity testing, may increase transmission *(49)*.
- **Other infections.** Presence of other Transmitted Infections and reproductive tract infections among adolescent girls and young women or their male partners is likely to increase HIV transmission *(50, 51)*.

Structural factors

The following contextual factors contribute causally to the above-mentioned direct factors, and they also may act as barriers to prevention uptake.

- **Harmful social and gender norms, gender inequality and unequal power dynamics.** Societal gender norms around masculinity, femininity and the social acceptability of concurrent relations contribute to generating larger sexual networks *(52)*. Cultural concepts of masculinity may encourage men to assume that wives, partners and daughters are the possessions of men, and most husbands expect or demand their so-called conjugal rights *(49)*. Concepts of femininity expect subordination, which can imply over-sexualizing young women while also associating shame with female sexual expression. Presence of specific harmful cultural practices—such as virginity testing or sexual cleansing of widows—may place young widowed women at risk of HIV *(49)*. For young women, income inequality and lack of income (or lack of control over it) may contribute to transactional sex or early marriage. Unequal gender power dynamics in relationships are associated with not only gender-based violence, but also men's relative control over sexual decision-making, which can influence women's negotiation skills and space *(53)*.
- **Low secondary school attendance.** The limited access to secondary and tertiary education among adolescent girls and young women contributes to increased HIV incidence risk, while school attendance and educational attainment have been shown to be associated with lower HIV risk and reduced sexual risk behaviour *(54, 55)*.
- **Labour migration and spousal separation.** Labour migration and urbanization contribute to rapid population movements, separation of couples and more frequent change of sexual partners. Studies have shown that migration is associated with higher HIV risk, which affects both the partner working away from home (in sub-Saharan Africa, this is more commonly men) and their sexual partners *(27, 56)*.
- **Barriers to accessing sexual and reproductive health and HIV services.** Age of consent laws, stigma, service provider bias

and discrimination limit the ability of young women to access health services, counselling and prevention tools (such as condoms, contraception, HIV testing and other services) *(2, 57)*.

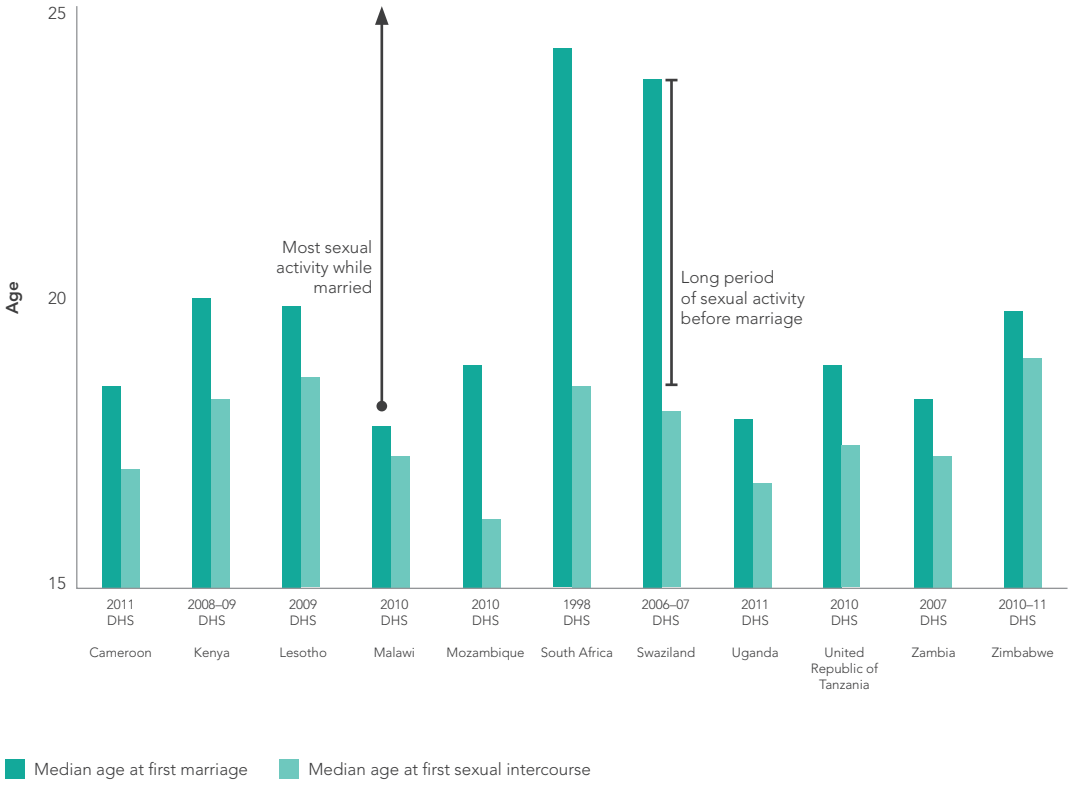
- **Orphanhood.** Young women who are orphaned have been found to experience a higher risk of HIV infection and to engage in more risky sexual behaviour *(58)*.
- **Child sexual abuse.** Sexual abuse in childhood—often involving relatives, neighbours or teachers—can directly lead to HIV transmission and establish a cascade of developmental and psychological consequences resulting in a range of risk behaviours (such as earlier sexual debut, more sexual partners and substance use). These behaviours may increase a woman's risk of both acquiring HIV and of being subjected to violence in adulthood *(59)*.
- **Gender-based violence.** A systematic review and meta-analysis confirmed an association between HIV and intimate partner violence, including physical violence and the combination of physical and sexual intimate partner violence *(60)*. The indirect pathways and common root causes may include gender norms, perceptions of masculinity and power relations *(61)*.
- **Marriage patterns.** As shown in Figure 5, the demographic profile of high-prevalence countries in eastern and southern Africa varies. Countries in southern Africa (Botswana, Lesotho, Namibia, South Africa and Swaziland) are characterized by lower marriage rates than many of the other priority countries in the region (where marriage rates are higher). Such demographic patterns are important to consider when attempting to reach young women and their male partners. While countries with low marriage rates will require a strong focus on transmission in casual relations, relationship formation and non-marital long-term relations, countries with early and higher marriage rates also may require more focus on prevention before marriage, in the early stages of marriage and in extramarital relations. Early marriage, particularly if it is with an older male partner, also may contribute to risk in some countries.

Many of the behavioural and biological factors influencing HIV acquisition among adolescent girls and young women are relational, which emphasizes the need to design programmes in ways that also include men. There may be substantial differences in behavioural and structural factors between urban and rural areas, as well as regional differences within countries. The key factors identified at the country level will inform the prioritization of prevention strategies for young women in specific locations.

Although HIV prevention in locations with high HIV prevalence is complex, declining numbers of new infections and HIV prevalence among young women in some countries (such as Botswana, Namibia, Zambia, Zimbabwe and several others) demonstrate that it is possible to halt and reverse HIV transmission, including among young women.

Figure 5

Different demographic patterns in relation to sex and marriage



Source: Demographic and Health Surveys (DHS), 1998–2011.

Designing effective HIV responses for adolescent girls and young women

Programmatic framework

This guidance proposes a simple programmatic framework that builds on the UNAIDS investment framework *(62)* and UNAIDS guidance on combination HIV prevention and human rights-based approaches to HIV programming *(63)*.

Results logic

This guidance is geared towards the implementation of multisectoral programmes that provide the most direct, impactful and cost-effective ways of reducing HIV incidence. Figure 6 illustrates the main steps from activity to impact level, and it provides examples of what the typical results would be at the different levels.

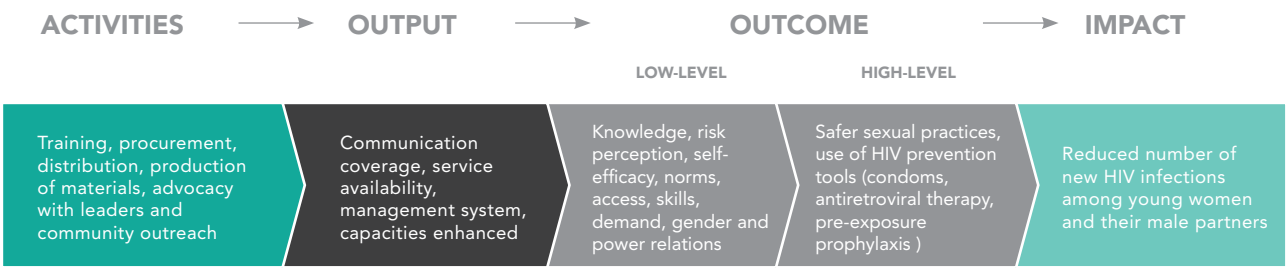
Evidence base for this guidance

The action areas in this guidance are based on two main types of evidence:

- Systematic reviews of the efficacy and effectiveness of different HIV prevention programmes.
- High-quality studies from settings with high HIV prevalence that had a biological outcome measure and an experimental (or quasi-experimental) design. This includes studies investigating causes of confirmed population-level HIV incidence declines in high HIV prevalence countries.

This guidance also considers the findings of comprehensive evidence reviews recently conducted, including a review of HIV prevention among adolescents that was supported

Figure 6
Results chain logic for programmes for HIV prevention among adolescent girls and young women



by UNICEF *(64)*, a comprehensive review of evidence for HIV prevention in high HIV prevalence countries conducted by the World Bank and United Nations Population Fund *(65)*, a review of what does not work for the sexual and reproductive health of adolescents *(66)*, and a review of evidence for HIV prevention among young women that was carried out by the United States President's Emergency Plan for AIDS Relief (PEPFAR) *(67)*.

A detailed table of studies that informed this guidance document is included in the Annex.

In addition, existing evidence-informed UN guidance on related areas of programming—including gender-responsive HIV programming or addressing violence against women—will be referenced *(61, 68)*.

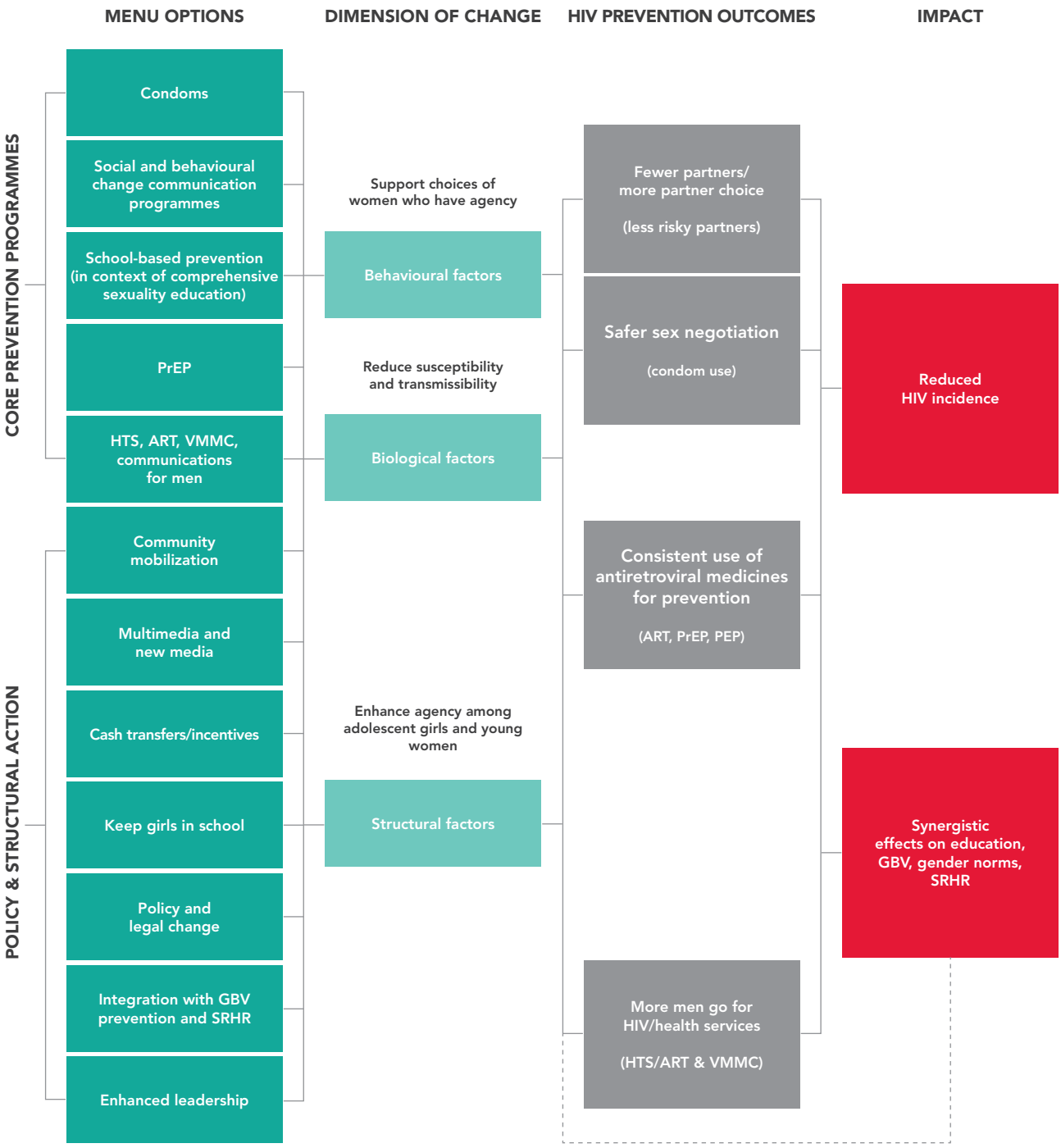
An options menu for country-specific combination prevention packages

Based on available evidence and programming experience, this guidance document proposes an options menu from which countries and districts can choose.

Decisions on priorities should be made based on country data and local contexts. For example, in settings where social grants and access to education are already high, focusing the HIV response on cash transfers may not add value or it may do so only in the sense of making existing transfers HIV-sensitive by including specifically vulnerable or excluded subgroups. Similarly, interpersonal communication addressing specific risk factors (such as multiple or age-disparate partnerships) will be most relevant in locations where the prevalence of these behaviour patterns is comparably high.

Figure 7

Detailed strategy mix for HIV prevention among adolescent girls and young women: a menu of options



ART: antiretroviral therapy, GBV: gender-based violence, HTS: HIV testing services, PEP: post-exposure prophylaxis, PrEP: pre-exposure prophylaxis, SRHR: sexual and reproductive health and rights, VMMC: voluntary medical male circumcision.

Different approaches for different epidemic settings

Focus on key locations and priority populations
Recognition is building that, even in the most profoundly affected hyperepidemic countries in southern Africa, risk varies by location. In Mozambique, for instance, mapping HIV prevalence showed that the highest densities of people living with HIV were in districts along transport corridors, in important seaports in the centre and south, and in areas that featured significant labour migration to mines in South Africa. Even in what is probably the most-severely affected geographic area in the world, KwaZulu-Natal in South Africa, risk is not uniformly distributed.

A recent study found that a uniformly distributed combination of prevention approaches could reduce new HIV infections in Kenya by 40% in 15 years. But new infections could be reduced by another 14% if a prevention strategy with the same budgetary resources focused on people and locations of greatest risk. Hence, this focused approach could result in an additional one third fewer infections each year *(69)*.

There already are good practices in place that demonstrate how this type of information has been used for prevention programming. Kenya's Prevention Revolution Roadmap, for instance, has not only clearly identified priority populations and intervention packages, but it also highlights the locations where they should be carried out. The Roadmap now needs to be rapidly implemented. The thorough analysis of epidemic and structural factors will empower countries to design more focused responses specifically for adolescent girls and young women within the context of programmes for other HIV-positive and HIV-negative men and women.

As shown in the previous chapter, there are differences in the level of the epidemic and the factors that influence transmission, even within eastern and southern Africa. It is therefore not possible to design a standard package of HIV programmes for adolescent girls and young women that can be applied in all countries and settings. HIV resources can be allocated more efficiently by providing differentiated packages of programmes for different subnational areas and subpopulations, and by ensuring that all packages and programmes are implemented with a human rights-based approach that respects and promotes the autonomy and agency of adolescent girls, young women and society in general in their access to health care.

Based on subnational epidemic information, countries may develop a typology of different epidemic areas and programme packages that are suitable for a particular context. Table 1 provides an example of how such a typology might look. This is not meant to be a standard typology for all priority countries, because their specific epidemic situation or data availability might require a different approach. The following points, however, should be considered by countries when developing their typologies:

- Modelled subnational HIV incidence levels for adolescent girls and young women are needed,

Table 1

Example of a typology of programmes for adolescent girls and young women clustered by HIV incidence levels

	Priority programmes	Priority population
Standard service package *(intensity of demand generation and outreach tied to HIV incidence levels)*	▪ Male & female condoms and lubricants. ▪ HIV testing and counselling services. ▪ Antiretroviral therapy. ▪ VMMC, including combination prevention package. ▪ Harm reduction for people who use drugs. ▪ Prevention programmes for young sex workers and sexually exploited adolescent girls, and for other key populations. ▪ Comprehensive sexuality education.	▪ All sexually active (all ages). ▪ All adolescents and adults. ▪ All people living with HIV. ▪ Adolescent boys and young men. ▪ All adolescents who use drugs. ▪ All adolescent who sell sex, are sexually exploited, other key populations. ▪ All adolescents.
Policy and structural actions *(intensity not tied to HIV incidence levels, relevant beyond high HIV incidence settings)*	▪ Advocacy with leaders and promotion of young women's leadership. ▪ Legal and policy support to access sexual and reproductive health services, including age of consent laws and aspects of service integration. ▪ Community mobilization, including social and gender norms and equality. ▪ Integration with (and access to) gender-based violence prevention and management. ▪ Innovative multimedia and new media approaches. ▪ Access to STI services, scheduled vaccines and other health care. ▪ Educational reform, or other measures to keep girls in school. ▪ Cash transfers or other social grants and social protection programmes.	▪ Leaders (all key types and ages). ▪ Law and policy-makers. ▪ Communities (women and men). ▪ Adolescents and adults. ▪ Adolescents and adults. ▪ Adolescents and adults. ▪ School students. ▪ Include vulnerable adolescent girls and young women (those selling sex, using drugs, migrants and others).
	Additional programme elements for women, ages 15–24, in high HIV incidence settings	
Extremely high HIV incidence ***(2.0 and above)***	**Standard service package plus** ▪ PrEP access, including outreach and adherence support *(high intensity outreach).* ▪ Cash transfers, incentives, parenting programmes and other activities to keep girls in school and increase parental monitoring *(high intensity).* ▪ School-based programmes with demonstrated evidence. ▪ Intensive social and behaviour change programmes; addressing demand generation, HIV risk perception, sexual behaviour, gender norms, gender-based violence and power (*high intensity community outreach).*	▪ All at substantial risk of HIV. ▪ Secondary school students and other adolescents. ▪ Secondary school students. ▪ Adolescents, young and adult women and men (include HIV-positive young people).

Very high HIV incidence ***(1.00–1.99)***	**Standard service package plus** ▪ PrEP access, including outreach and adherence support *(focused outreach)*. ▪ Cash transfers, incentives, parenting programmes and other activities to keep girls in school and increase parental monitoring. ▪ School-based programmes with demonstrated evidence. ▪ Intensive social and behaviour change programmes and community outreach; addressing demand generation, HIV risk perception, sexual behaviour, gender norms, gender-based violence and power *(focused outreach)*.	▪ All at substantial risk of HIV. ▪ Secondary school students and other adolescents. ▪ Secondary school students. ▪ Adolescents, young and adult women and men (include HIV-positive young people).
High HIV incidence setting (0.3–0.99)	**Standard service package plus** ▪ School-based programmes with demonstrated evidence. ▪ Focused social and behaviour change programmes, and community outreach for young women (including addressing demand generation, sexual behaviour and gender-based violence). ▪ Ensure young women are part of demand generation and can access standard HIV services.	▪ Secondary school students. ▪ Adolescents, young and adult women and men (include HIV-positive young people).
Moderate HIV incidence (0.1–0.29)	▪ Standard service package plus. ▪ School-based programmes with demonstrated evidence (provided in context of comprehensive sexuality education). ▪ Ensure young women are part of demand generation and can access standard HIV services.	▪ Secondary school students. ▪ Adolescents, young and adult women and men (include HIV-positive young people).
incidence (0.0–0.09)	▪ Standard service package plus. ▪ Ensure young women are part of demand generation and can access standard HIV services.	▪ Adolescents, young and adult women and men (include HIV-positive young people).

or HIV prevalence among young women can be used as a proxy (considering the limitations mentioned above).

- The level of HIV incidence or prevalence in a population heavily depends on how the population was defined in relation to age and location. HIV incidence levels might not exceed a certain threshold—e.g. 1 in 100 person years—for adolescent girls and young women aged 15 to 24 years as a whole (or just for those aged 15 to 19), but it might exceed the threshold for young adult women aged 20 to 24. The same applies to geographic analyses, because even if a certain region does not show high HIV incidence, specific locations (such as cities, mining areas or transit routes) might have higher HIV incidence levels.

- The same programme can be provided in different epidemic settings with different levels of intensity. For example, while condom access is required in all epidemic settings within the typology, promotion can be intensified in high HIV incidence settings. Similarly, while PrEP is proposed in settings classified as having "extremely high" and "very high" incidence, outreach should be most intensive among "extremely high" incidence groups. The typology example therefore indicates specifically where "high intensity outreach" is required.
- The typology example assumes that a standard package of HIV services is already provided and should be available in all areas with a level of intensity commensurate with HIV epidemic levels.
- The typology assumes that policy and structural programmes are provided according to the need in the specific sector, while considering requirements of (and implications for) HIV programmes.
- Packages need to prioritize evidence-informed programmes (as explained further in subsequent chapters).

Delivering effective HIV prevention programmes for adolescent girls and young women

Condom promotion and distribution

Condoms, when used consistently and correctly, are highly effective in preventing the sexual transmission of HIV: laboratory studies show that they provide an impermeable barrier to particles the size of sperm and STI pathogens, including HIV *(70, 71)*. Breakage or slippage, which are due to incorrect use, contribute to failure in these studies.

Condom use with a non-regular partner varies greatly globally. Even among countries with high HIV prevalence, condom use by young women with non-regular partners ranges between 40% in Zambia to 68% in Namibia. Reported condom use among young women also is consistently lower than among young men.[7] Nevertheless, high levels of condom use with non-regular partners are achievable in sub-Saharan Africa (as illustrated in Figure 8).

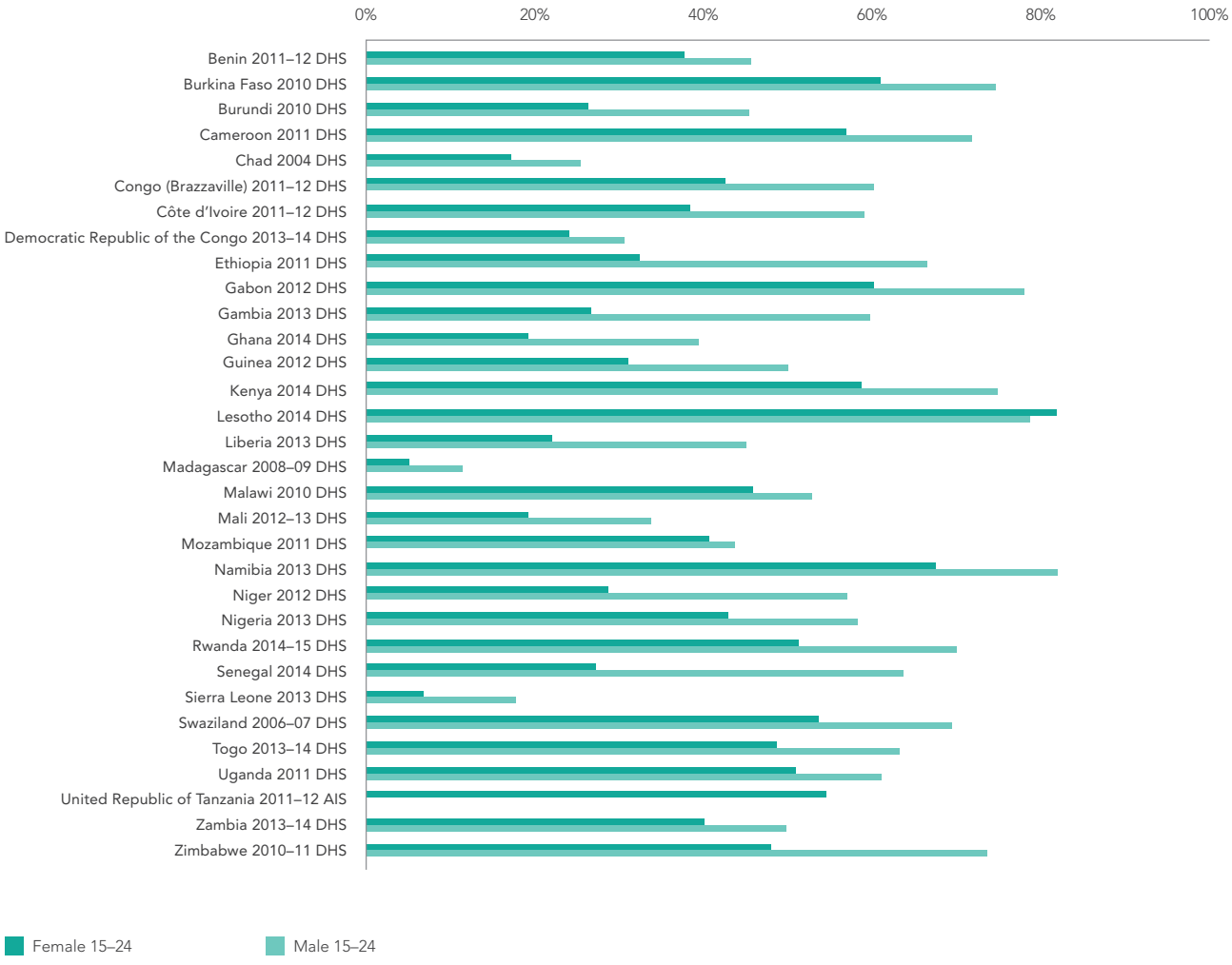
Issues to consider in implementation

Condom promotion for adolescent girls and young women faces a number of barriers, which explains the low levels of condom use in some country contexts, even in some countries with high HIV prevalence. Table 3 illustrates how barriers at the individual, relational, community and society levels can be analysed systematically.

[7] Possible explanations for the difference include that the sexual relations reported by young men may include a larger proportion of contact with sex workers, among whom condom use is higher.

Figure 8

Condom use at last sex with a non-regular partner



Source: Demographic and Health Surveys 2004-2014, Tanzania AIDS Indicator Survey 2011-2.

Table 2

Framework for action: condom promotion and distribution

Intended effects	**Consistent use of male and female condoms, in particular with non-regular and serodiscordant partners.**
Priority populations	Adolescent girls and young women aged 15–24 years who have non-regular partners and serodiscordant couples in priority countries, with further segmentation by age and location to ensure access by different groups.
Settings for delivery	Social marketing of male and female condoms through retail networks, health facilities (provider-initiated distribution), condom dispensers and schools; community-based promotion and distribution.
Cost estimate	**Commodity cost *(72)*** *Male condom:* US$ 0.03 per condom; US$ 4 for an annual supply of 120 condoms. *Female condom:* US$ 0.33–0.55 per condom; US$ 40–66 for an annual supply of 120 condoms. Additional costs for *lubricants*. **Programming costs** Demand generation, delivery, storage, distribution and skills-building.
Other considerations	▪ Implementation in the context of overall condom programming for all populations, with specific communication and distribution channels (schools, dispensers, youth-friendly health facilities, social marketing) for adolescent girls and young women. ▪ Need for business-style distribution systems. ▪ National- and district-level distribution targets. ▪ Need for skills-building on condom negotiation and use. ▪ Intensified condom distribution and demand generation.

Based on analysis of barriers, programmes may be designed. These include individual- and relational-level programmes (such as education and communication to normalize condom use), community programmes (in order to increase condom availability and promotion by health workers), or society-level initiatives (such as policy change and resource allocation).

Table 3

Barriers to condom use among adolescent girls and young women

Behavioural		Structural	
Individual	**Relational**	**Community**	**Society**
▪ Do not know that condoms are protective. ▪ Do not believe that condoms are protective. ▪ Do not believe they can get their partners to use condoms. ▪ Do not know where they can get condoms. ▪ Feel embarrassed to ask for condoms. ▪ Cannot pay for condoms. ▪ Do not know how to use condoms. ▪ Cannot negotiate condom use.	▪ Partners do not know that condoms are protective. ▪ Partners do not believe that condoms are protective. ▪ Partners do not believe they need to use condoms. ▪ Partners do not like to use condoms. ▪ Partners do not have skills to use condoms.	▪ Condoms are not available in shops. ▪ Condoms are available in shops, but vendors do not sell them to young women. ▪ Condoms are not available in health facilities. ▪ Condoms are available in health facilities, but health workers do not offer them. ▪ Condoms are offered for free, but in small quantities, which may imply cost for returning to the facility.	▪ Laws and policies do not support the promotion and free distribution of condoms. ▪ Inadequate allocation of resources for condom procurement and distribution. ▪ Laws prohibit the sale of condoms, especially to unmarried young women.

Policy and implementation guidance on comprehensive condom programming can be found elsewhere *(73)*. What is specifically required by adolescent girls and young women in countries and settings with high HIV incidence are renewed condom programmes that have clear national and subnational targets for condom distribution, demand generation and use. Several aspects must be considered in order to achieve those targets:

- Clear distribution plans and market segmentation are required. It is essential for plans to consider the specific needs of adolescent girls and young women, and to engage them in the development of condom programme acceleration plans.
- Barriers to condom access for young women need to be overcome. Even where knowledge on the protective effect of condoms is high, young women's knowledge on where they can personally access condoms is lower in most countries *(74)*. It is necessary to create additional distribution points (such as dispensers) where male and female condoms are easy to access for adolescent girls and young women.

- Provider-initiated condom offers—such as a three-month supply of condoms (30 condoms)—could greatly enhance the availability of condoms at relatively limited additional cost. The cost of potential wastage caused by increased provider-initiated distribution is likely to be lower than the cost for clients to collect condoms more frequently (which would take more time for both the provider and the client).
- Demand-side barriers, facilitating factors for consistent use and product preferences among young women and their male partners must be studied through quantitative and qualitative studies at the country level. These data can be used to increase product choice, demand generation and community outreach to improve skills in relation to condom use and negotiation.
- As demonstrated by programmes in Namibia and South Africa, condom promotion and distribution in schools is feasible in high HIV incidence countries. These approaches could be replicated in other countries.
- In a study in South Africa, young women with more equitable gender norms were more likely to use condoms than those with less equitable gender norms *(75)*. This illustrates the need for continued social and behaviour change programmes that address barriers to condoms use and the norms supporting them.

Intensive social and behaviour change communication programmes

Social and behaviour change communication programmes entail a combination of different activities, ranging from individual counselling to small group, community and media activities. What distinguishes such programmes from previously promoted behaviour change communication (BCC) programmes is that they not only address knowledge, risk and behaviour, but also underlying social and gender norms.

This section covers intensive approaches, which involve a combination of different face-to-face activities—including advocacy, communication and training activities—that address multiple outcomes, including knowledge, risk perception, norms, skills, sexual behaviours and HIV service demand. Multimedia, school-based, and broader community mobilization activities are covered separately in this guidance document, but in practice, these approaches often will complement or be part of social and behaviour change programmes.[8]

Early HIV declines in Uganda in the early 1990s and in Zimbabwe in the late 1990s occurred at times when people started to speak about HIV vigorously in their social networks and when a large increase in interpersonal communication about HIV was recorded *(76, 77)*. These declines showed the potential of increased face-to-

[8] See the respective sections on school-based HIV prevention, multimedia approaches and community mobilization in this guide.

face communication about HIV, but were not replicated elsewhere, and in the case of Uganda, they also were not sustained. Evidence on social and behaviour change programmes from randomized control trials with biological outcome measures has been scarce for a long time in sub-Saharan Africa. An exception is the Stepping Stones trial, which found reduced incidence of HSV2 (but not HIV) among participants exposed to the intervention, which involves multiple group sessions based on a gender-transformative HIV prevention approach *(78)*. The Stepping Stones approach has been adapted in multiple countries, and a range of similar methodologies have been used. The SHARE trial—which replicated elements of Stepping Stones as one element of a multichannel intervention to reduce intimate partner violence, HIV and harmful gender norms—reduced HIV incidence by one third *(79)*. The Stepping Stones intervention includes a series of small group sessions where young women, young men, adult women and adult men are separated. The separate sessions are complemented by sessions for the entire community, and the programme culminates in a final session, where the respective groups formulate their requests for change in community norms and practice.

The SASA! study conducted in Kampala, Uganda, found substantial reductions in intimate partner violence and reported concurrent sexual relations (*80)*. As SASA! is primarily a community mobilization intervention, it is covered in that section, while the SHARE trial is covered in more detail in the section on gender-based violence prevention.[9]

Various social and behaviour change programmes have achieved high coverage and resulted in improved attitudes, condom use and uptake of HIV testing services. Some examples of large-scale multichannel programmes that documented such effects—including among adolescent girls and young women—are the LoveLife multimedia campaign in South Africa *(81),* Zimbabwe's national behaviour change programme *(82)* and the multicountry One Love campaign in southern Africa *(83)*.

All the mentioned methodologies involve complementary components for young men and male and female adult populations; reaching the different priority populations helps to achieve sustained normative and behaviour change at the community level.

Issues to consider in implementation

Social and behaviour change programmes for adolescent girls and young women—as well as women and men among other age groups—are only one component of HIV prevention, and they will not be sufficient on their own to halt epidemics. Defunding such programmes, however, entails a risk of reducing communication about HIV in severely affected communities

[9] See the section on integration of HIV with gender-based violence and SRHR in *Policies change and structural programmes* chapter.

Table 4

Framework for action: social behaviour change communication programmes

Intended effects	**Safer behaviours and increased service use achieved through improved communication, risk perception, HIV disclosure, reduced gender-based violence and changes in social and gender norms.**
Priority populations	Adolescent girls and young women aged 15 to 24 years in priority countries with further disaggregation by age and relationship status; complementary programmes for adolescent boys and young men as well as adult women and men.
Settings for delivery	Community venues, work places, secondary and tertiary education institutions, and health facilities.
Cost estimate (assumed economies of scale)	**UNAIDS internal cost estimate**[10] Cost for an SBCC community course with eight exposures: around US$ 8.60 (low-income countries) to 17.30 (middle-income countries) per person reached per year. **Avenir unit cost database** US$ 1.31–28.30 per person reached for various models of youth outreach *(84)*. **SASA! costing** US$ 5 per year; US$ 21 for a full course *(85)*. Potentially more in higher-income settings and for approaches involving different components *(86)*.
Other considerations	▪ Need for cost-efficient, focused delivery approach. ▪ Consider reducing to eight to ten core sessions. ▪ Deliver through credible local cadres. ▪ Adapt curriculum to country context. ▪ Pre-test. ▪ Evaluate.

[10] As part of the preparation of this publication, UNAIDS conducted a rapid bottom-up costing of specific menu options. A range of cost estimates is provided because most prevention programmes require a human resource component, the cost of which differs between low- and middle-income countries.

and increasing risk behaviours, which may offset the benefits of biomedical programmes. It is therefore key to transform communication programmes, rebuilding them around evidence-informed models and linking young women and their partners—through demand generation—to HIV services. The following issues require particular attention:

- Most successful models involved both males and females, as well as young people and adults, but they use tailor-made messages for the different groups.
- Successful approaches followed structured programme models, which complemented the building of knowledge, risk perception and skills with approaches to change social and community norms.
- Successful programmes had strong community participation, well-defined curricula and gender-transformative approaches that addressed norms, gender roles and power imbalances.
- It is necessary to ensure that group meetings involve the same participants in a series of eight to ten sessions in order to enhance knowledge, reflection and support for adopting safer practices.
- For delivering more complex programmes at scale, it will be important to streamline implementation models and adapt materials and methods at the country level.
- It will be important to determine the most suitable delivery modalities, such as whether to work through voluntary community facilitators, nongovernmental organization outreach workers or full-time health extension workers. The selection of the correct facilitators is central to the success of programmes.
- Clear targets, monitoring and quality assurance are critical, as are qualitative and quantitative evaluations, although due to cost considerations, not every setting will require its own evaluation.

School-based HIV prevention

Schools can make important contributions to HIV prevention. Reaching girls who are in school presents an opportunity to reach a substantial proportion of adolescent girls at low cost in order to address key HIV prevention issues that affect them. Furthermore, schools can contribute to HIV prevention by keeping girls in school.[11]

School-based HIV prevention mostly consists of interpersonal communication approaches, but it should also involve condom distribution, which is still unavailable in school-based programmes in most high HIV prevalence settings. In all countries—regardless of HIV prevalence—comprehensive sexuality education should be integrated into school curricula and should include the promotion of gender equality and respect for human rights. HIV prevention communication should be integrated into all comprehensive

[11] Please see the section on increased access to schooling in *Policy change and structural programmes* chapter

sexuality education programmes, and it should take a human rights-based approach, be evidence-based, non-discriminatory and promote gender equality *(87)*.

There are detailed systematic reviews that confirm the effects of school-based HIV prevention programmes and comprehensive sexuality education on knowledge, self-esteem, self-efficacy, attitudes and norms—and the moderate effects they have on self-reported behaviours (delay of debut, condom use and reduced partner numbers) *(88–90)*.

In countries with high HIV incidence among young women, comprehensive sexuality education can be complemented by specific school-based HIV prevention activities and campaigns. For example, a school-based campaign on the high HIV levels among adult men and the risk of unprotected sex that took place in western Kenya reduced teenage pregnancy by 28% and teenage pregnancy from an older partner by over 60 % (proxies for HIV-related risk reduction) (91). This approach, which was also replicated in Zimbabwe, involves providing a simple session informing young women about HIV

Table 5

Framework for implementation: school-based HIV prevention in the context of comprehensive sexuality education

Intended effects	**Risk reduction through improved knowledge, attitudes, risk perception and supportive gender norms.**
Priority populations	Adolescent girls within primary schools and secondary schools, and young women in tertiary institutions (with complementary and partially joint activities for adolescent boys and young men).
Settings for delivery	Primary schools, secondary schools and tertiary institutions.
Cost estimate (assumed economies of scale)	**UNAIDS internal cost estimate** Cost per person reached in a campaign (two exposures per person): US$ 1.5 (low-income country) to US$ 3 (middle-income country), if provided at scale. Cost for introducing comprehensive sexuality education varies between countries, and costs for maintaining should be covered as part of the overall education budget.

Other considerations	▪ Sustain and integrate comprehensive sexuality education into school curricula.
	▪ Adult-led facilitation likely more effective than peer-led facilitation *(88, 89)*.
	▪ Short campaigns (one or two sessions).
	  ▪ cascade models (training of trainers).
	  ▪ focus on risk perception, prevention choices, self-efficacy and basic skills.

prevalence among male partners of different ages, the implications for HIV risk for young women, and basic HIV prevention methods. The Kenya study suggests that this specific information, which was previously not communicated to young women, was sufficient for them to choose condom-protected sex with same-age partners with greater frequency.

Issues to consider in implementation

The large potential of school-based HIV prevention and comprehensive sexuality education lies in the opportunity to achieve high coverage in short periods of time. That reach also reflects rising levels of school attendance in many parts of sub-Saharan Africa over the past 15 years. Just as this potential for schools-based programmes is increasingly being utilized to mobilize young men for VMMC outreach campaigns, there is significant potential for focused prevention campaigns for young women that emphasize key factors driving infections in the specific country and local context.

In terms of changing knowledge, attitudes and self-reported behaviours, some approaches were found to be more effective than others in school-based programmes:

- Comprehensive sexuality education content must respond appropriately to the specific context and needs of young people in order to be effective. This adaptability is central to culturally relevant programming, and it includes understanding the messages (sometimes positive, sometimes negative) that cultures convey about gender, sex and sexuality.
- Curricula-based education was shown to be more effective when it addresses gender norms and power, including how power inequalities in relationships influence the ability of individuals to protect their health *(92)*.
- Teacher training is required to ensure that comprehensive sexuality education is provided in a safe environment.
- A systematic review of abstinence-only programmes in high-income countries found no effect (93), and insufficient evidence exists for low- and middle-income countries *(89)*.
- No programmes included in a recent systematic review had negative effects *(88)*.
- A systematic review showed that effective school-based programmes included community-based components, "such as training health-care staff to offer youth-friendly services, distributing condoms, and involving parents, teachers and community members in intervention development" (89). This points to the need for strong youth, civic and parental engagement, as described in the other menu options of this guidance document.
- School-based campaigns on age-disparate sex will be most effective with adolescent girls below the age of 20 among whom HIV prevalence is still low. Model analysis showed that if many young women who are already HIV-positive shifted to young male partners, they would pass on HIV to young men, which would reduce the population-level benefits of such a campaign *(94)*.

- It also is important to ensure that campaigns are not replicating stereotypes of so-called sugar daddies, as very large age differences (exceeding 15 years) are rare *(95)*.

Pre-exposure prophylaxis

What is pre-exposure prophylaxis (PrEP)?
PrEP is the use of antiretroviral medicines by HIV-negative individuals to avoid HIV infection. PrEP is highly effective when taken, but it has not worked where adherence was low *(96)*. In this document, the term PrEP refers to oral PrEP (which is taken in the form of pills), as research on other options is still ongoing.

For whom is PrEP recommended?
The World Health Organization (WHO) has broadened the recommendation for PrEP to include all population groups at substantial risk of HIV infection *(97)*. Offering voluntary PrEP should be a priority for populations with an HIV incidence of about 3 per 100 person years or higher.

As outlined in the typology in the previous chapter, if HIV incidence in a population of young women aged 15 to 24 years exceeds 2 per 100 person years, it is highly likely that HIV incidence among subgroups (such as those aged 20–24 years or people in specific locations) will exceed the threshold of 3 per 100 person years. In such settings, PrEP could be offered to these subgroups on a large scale through intensive outreach and demand generation, while still respecting the principles of informed consent, autonomy and decision-making in health care.

Even in settings where HIV incidence is between 1 and 2 per 100 person years, incidence among smaller subgroups might exceed the threshold, and focused outreach could be provided.

In any case, PrEP should be an additional prevention choice in a comprehensive package of services that also includes HIV testing, counselling, SBCC, male and female condoms, lubricants, antiretroviral therapy for partners with HIV infection, VMMC, and harm reduction for people who use drugs *(97)*.

How to offer PrEP for young women?
Projects offering voluntary PrEP to HIV-negative partners in serodiscordant couples *(98)* and individual women and men *(99)* in Africa have been successful in ensuring relatively high levels of adherence, while projects offering PrEP exclusively to young women have not *(100, 101)*. When offering PrEP to young women, it will therefore be important to discuss the following in the specific country context:

- What delivery models would work for adolescent girls and young women.
- How to reach adolescent girls and young women who might benefit the most.
- How to support adolescent girls and young women to understand their HIV risk.
- How to improve the ability of adolescent girls and young women to negotiate the use of PrEP with their partners.
- How to mitigate any potential harms (such as gender-based violence) that might result or

prevent them from using PrEP and considering it to be useful for them.

- How to provide adherence counselling and strengthen social support while respecting their decision-making autonomy.

PrEP will be critical for young sex workers and sexually exploited adolescent girls. Implementation modalities to reach these women in cities and other key locations need to be tested and taken to scale.

Case study: the Pluspills programme in Cape Town and Soweto in South Africa

The Pluspills programme is offering oral PrEP to men and women aged 15–19 years. Adherence is supported through weekly or daily SMS messages, WhatsApp chat groups and PrEP adherence clubs. Young people assess their risk using an Internet app (the risk rater) that helps young people visualize their risk and the impact of prevention.

Table 6

Framework for implementation: pre-exposure prophylaxis

Intended effects	**Reduce susceptibility to HIV infection.**
Priority populations	Adolescent girls and young women at substantial risk of HIV. ▪ in high HIV incidence locations (as outlined above). ▪ with partners who are at high risk and with unknown HIV status. ▪ in serodiscordant relationships (in particular for when the male partner is newly initiated on antiretroviral therapy and not yet virally suppressed).
Settings for delivery	Health care systems, pharmacies, nongovernmental service providers, linkages to sexual and reproductive health service delivery (including contraception).
Cost estimate (assumed economies of scale)	**Commodity cost** Drugs and monitoring costs should be below US$ 100 per person year in high HIV prevalence countries, plus lab testing, personnel, demand generation and adherence support.
Other considerations	▪ Very cost-intensive (even in high prevalence communities: more people on PrEP are likely to be required to avert one infection than with antiretroviral therapy for people living with HIV). ▪ Legal issues: age of consent for testing and PrEP, and respecting the evolving capacities of adolescents to make decisions. ▪ Good support to and monitoring of adherence is essential.

Issues to consider in implementation

At the country level, implementation requires several preparations for providing PrEP to adolescent girls, young women and other populations at substantial risk:

- Countries need to accelerate the process of registering antiretroviral medicines for PrEP use, develop national guidelines for PrEP implementation and make PrEP available through a range of different mechanisms, including for adolescent girls and young women.
- Population groups that might benefit from PrEP need to be identified, taking into consideration both the levels of HIV incidence and the geographical variation in HIV incidence. This might include sex workers, men who have sex with men, and adolescent girls and young women in specific geographic areas of a country.
- It is necessary to hold a discussion at the country level about what the HIV incidence or prevalence threshold should be for starting provision of PrEP to specific populations (including adolescent girls and young women).[12]
- In many communities, the benefits of PrEP are not well-known, and efforts are needed to increase awareness and knowledge of communities and providers, and to ensure that informed consent is guaranteed in the provision of PrEP.
- Stigma and service provider bias could be barriers to PrEP access for young women. Preferences for service access by young women need to be studied and different demand generation and adherence models developed and tested.
- As intimate partner violence has been associated with lower adherence to PrEP, strategies to address it in the context of PrEP are required *(102)*.

Accelerated uptake of HIV testing services, antiretroviral therapy and voluntary medical male circumcision by men

Reducing HIV incidence among adolescent girls and young women requires accelerated uptake of the standard package of services among men and boys. In most country contexts, men are less likely to access HIV testing and treatment services than women, and this reduces the population-level benefits of treatment as prevention for adolescent girls and young women.

The following actions can improve delivery of a standard package of services by increasing male involvement, which in turn can result in positive outcomes for adolescent girls and young women.

[12] It is worth noting that population-level HIV incidence for young women aged 15 to 24 years in a country or district might underestimate HIV incidence among subgroups of young women within that particular area. A considerable proportion of young women aged 15–24 are not sexually active (i.e. HIV incidence in the sexually active group within the population aged 15–24 might be higher), and the sexually active group might include adolescent girls and young women engaging in transactional sex, young sex workers and adolescentsexploited into sex work, using drugs or living in specific locations with elevated incidence.

- **HIV testing services (HTS).** Although this is not covered extensively in this document because guidance on its scale-up is already provided elsewhere *(9),* there are a number of key considerations when attempting to make HIV testing services work better for reducing HIV incidence among adolescent girls and young women.
  - HIV testing services can be a critical entry point for other prevention communication and tools. HIV testing services should **reinforce key communication messages to increase sexual risk perception** in the specific epidemic context (such as on the risk of age-disparate sex and multiple partnerships) as an entry point for different prevention choices.
  - A **three-month condom supply** could be offered to all sexually active HIV testing services clients, including adolescent girls and young women.
  - Given the high proportion of HIV incidence in the early stages of relationships, it is essential for adolescent girls, young women and their partners to access testing early in new relationships, before the first unprotected sexual intercourse. This requires enhanced promotion of early HIV testing services among new couples **and the creation of a culture of voluntary pre-relationship and pre-marriage counselling.** Mandatory pre-marriage HIV testing services is not recommended, and there is a need to ensure in-depth support and counselling for couples where one or both partners have tested HIV-positive; this will help to avoid negative consequences (such as intimate partner violence) and ensure early linkages to antiretroviral therapy *(103).*
  - **Self-testing** offers an opportunity to reach people who are less likely to be reached through health facilities (such as men). Innovative modalities are being explored from Internet-based sales of self-tests, home-based self-testing to bicycle couriered self-home tests in Khayelitsha, South Africa *(104).*
- **Immediate antiretroviral therapy for all (including men).** A major barrier for realizing population-level prevention effects of antiretroviral therapy for adolescent girls and young women is late diagnosis and antiretroviral therapy initiation among men. Additional strategies to reach men earlier with HIV testing services include index partner testing, male involvement in antenatal care and services to prevent new infections among children and keep their mothers alive *(105),* couples/partner HIV testing services, provider-initiated testing, and HIV testing services outreach to venues frequented by men. Simple tools (such as referral letters provided to men during antenatal care) also can substantially increase uptake of HIV testing among male partners *(106).*
- **Changing norms around masculinity and related behaviours.** It is commonly assumed that men do not change behaviours, but significant behaviour changes—both in relation to increasing condom use and to reductions in the number of partners—have been observed

among adult men in countries that have seen HIV incidence declines. In Zimbabwe, for example, it was reported that until the early 1990s, men liked to be seen with many girlfriends, and that they considered an STI to be a sign of manhood. From the late 1990s, however, having multiple partners and STIs was no longer considered to be as desirable—rather, it was embarrassing *(77)*. These and other contemporary examples (such as a behavioural intervention delivered to VMMC clients in South Africa) suggest that behaviour and normative change is possible among male partners of adolescent girls and young women in high HIV prevalence locations *(107)*.

- **VMMC.** Promoting the scale up of VMMC in priority countries can be a critical contributor to reducing HIV prevalence among young women, but population-level effects will only gradually increase over time, because most men accessing VMMC are from younger age groups than the sexual partners of adolescent girls and young women. The VMMC 2021 strategy provides a new framework with an expanded service package to increase men's uptake of health services, with specific service packages for not only adolescents and young adult men, but also for adult men at high risk of HIV infection *(7)*.

Policy change and structural programmes

This chapter describes menu options, which are essential supportive programmes for HIV prevention. Those options include health and social programmes that are important in their own right and deserve the attention of public policy and financial support.

Which structural programmes and supportive policy actions are most important for adolescent girls and young women in the country or local context?

HIV transmission can be related to a range of structural factors that may impact the effectiveness of programmes. These factors can vary greatly between countries because of social, economic and cultural differences, as well as the stage of implementation of the country's prevention response. In many cases, the actual bottlenecks may be practical implementation obstacles such as a supply chain gap for condoms or the lack of involvement of local leadership.

It is important to assess barriers and bottlenecks critically in the country and local context rather than simply referring to broad concepts such as "poverty," "inequality" or "traditional norms." The more specific the identified bottlenecks and gaps, the more detailed the actions that can be defined.

Bottleneck and gap analysis tools are available as part of broader guidance for country assessments *(108)*. As shown in Figure 9, analysis can closely and systematically follow the results chain of programmes for adolescent girls and young women, and it can look for bottlenecks in moving from one level to the next, starting from the main

impact goal and moving backwards to the actual programme inputs.

Analysis will not necessarily need to tackle the entire prevention response for adolescent girls and young women. Instead, it commonly will focus on specific priority components. Figure 10 shows a bottleneck analysis for condom use in Swaziland, with a focus on determining bottlenecks among young women.

Figure 9

Analysing gaps and bottlenecks of HIV prevention programmes for adolescent girls and young women

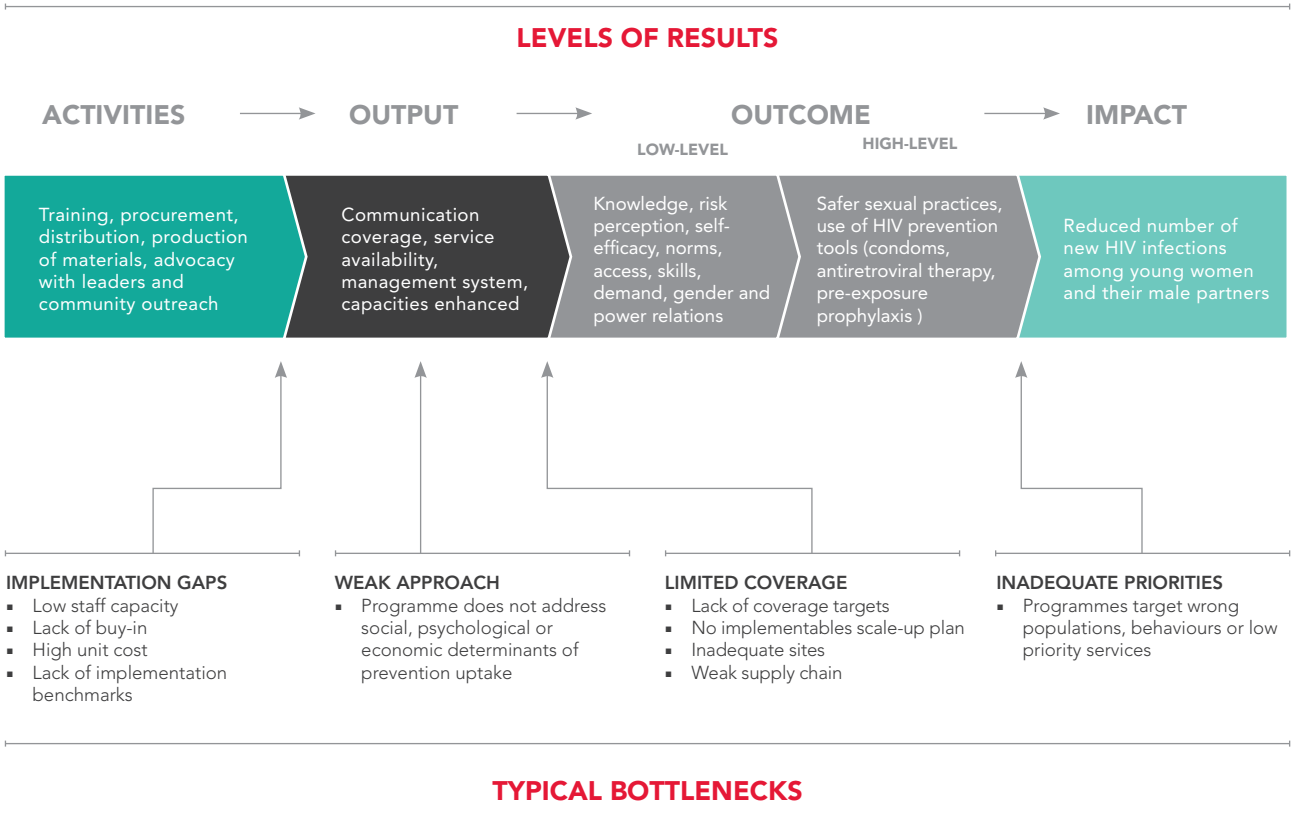
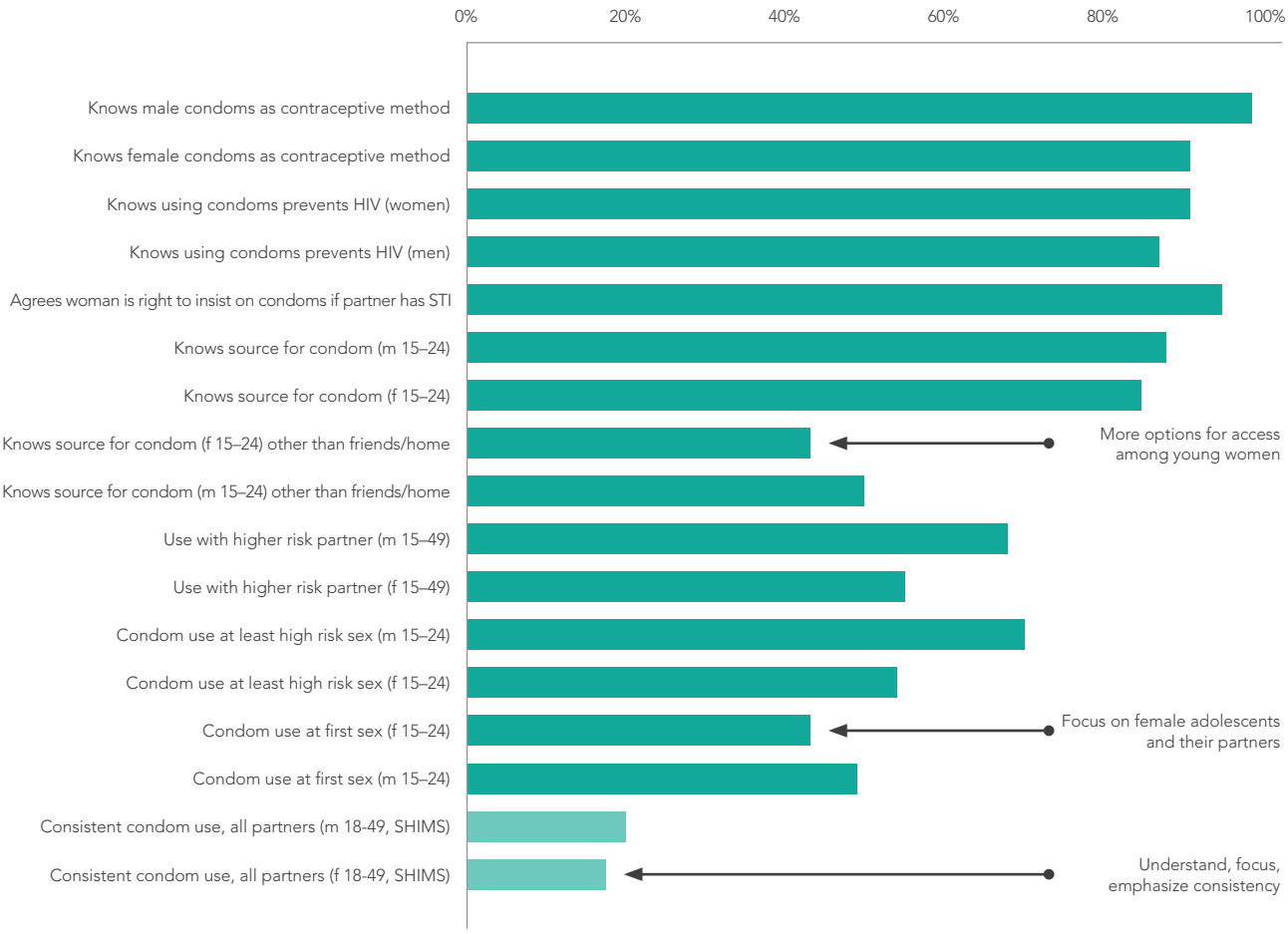


Figure 10
Example of quantitative bottleneck analysis: the condom cascade in Swaziland



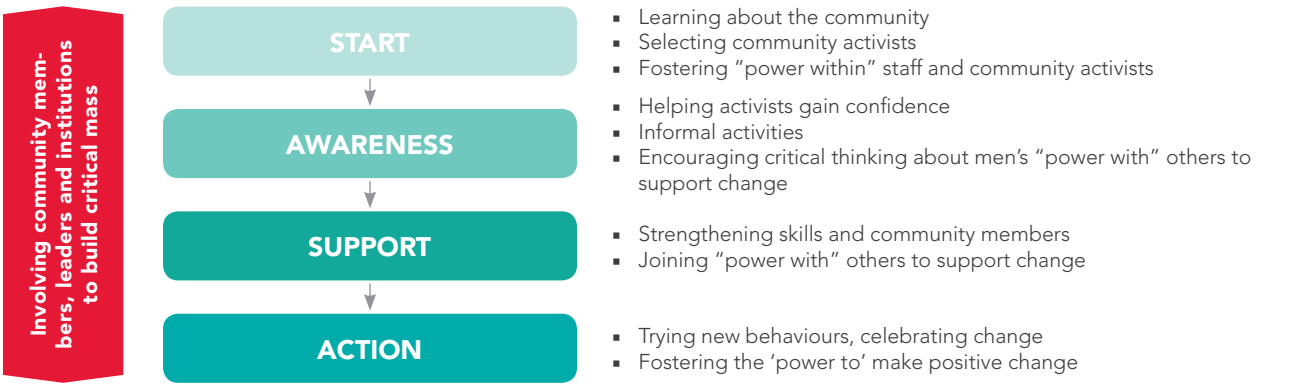
Source: RATESA support to review of Swaziland National HIV Strategic Plan, 2013

Community mobilization

Community mobilization has been described as a process that helps communities identify, respond to, and address their needs *(109)*. Community mobilization and participation has made substantial contributions to HIV prevention, including among adolescent girls and young women. Large-scale community outreach was a key success factor in Uganda's early HIV decline. In Manicaland, Zimbabwe, it was documented that participation in community groups was associated with lower HIV incidence among women in the early 2000s *(110)*. In Masaka, Uganda, HIV incidence was lower among women who were reached with different types of community initiatives *(111)*.[13] Other studies in the region did not find significant effects of community programmes on HIV incidence, but some did find effects on knowledge, attitudes and self-reported behaviour *(112)*. A comprehensive review documented a range of other effects of community programmes *(113)*.

Although community mobilization on its own cannot be expected to reduce HIV incidence among adolescent girls and young women in high HIV prevalence locations, it can make important contributions towards empowering

Figure 11
The SASA! approach: how it works



Source: SASA!

[13] It should be noted, however, that this lower incidence (59%) was in individual analysis while randomization had been at the community level. There is therefore potential selection bias (self-selection of more motivated persons).

adolescents and youth, changing norms and generating service demand.

The SASA! project (mentioned in Delivering effective HIV prevention programmes for adolescent girls and young women) is a community mobilization approach that has been tested in a randomized control trial. It involves highly participatory engagement of communities in dialogues around power and harmful gender norms related to HIV and violence against women. The SASA! study documented a number of synergistic effects on HIV-related risk behaviours and relationship dynamics, such as concurrent sexual relations reported by men, uptake of HIV prevention options (including condom use and HIV testing) and decreases in reported intimate partner violence *(114).* Developed in Kampala, Uganda, SASA! is now being scaled up in other countries.

In practice, community mobilization approaches often will be implemented through the same channels and organizations as social and behavioural change communication programmes and will complement them.

Table 7

Framework for action: community mobilization

Intended effects	**Safer sexual practice, improved risk perception, higher HIV disclosure, and increased demand for HIV and sexual and reproductive health services.**
Priority populations	Women and men in high HIV incidence communities.
Settings for delivery	Existing community events such as community meetings, weddings, funerals, agricultural field days, trade fairs, outreach to schools, work places, religious institutions and road shows.
Cost estimate (assumed economies of scale)	**UNAIDS internal cost estimate** US$ 0.50 (low-income countries) to US$ 1.00 (middle-income countries) per exposure; US$ 2.00 (low-income countries) to US$ 3.90 (middle-income countries), per person reached per year, assuming four exposures per person per year. **Avenir unit cost database** US$ 0.30–10.70 for a range of different approaches.
Other considerations	▪ Support normative change or demand generation for HIV services (typically not a stand-alone approach). ▪ Use existing nongovernmental structures and events. ▪ Integrate with interpersonal communication and demand generation for HIV services. ▪ Replicate and adapt proven models.

Innovative multimedia approaches

Mass media components (including radio and television programmes) are often part of the social and behaviour change communication programmes. A range of approaches have been applied for HIV prevention, including call-in programmes, talk shows, soap operas with HIV prevention messages, and advertising for condoms and HIV testing services.

Systematic reviews of various mass media approaches found mixed results on HIV-related knowledge and risky sexual behaviours *(115)*. While mass media campaigns have had consistent short-term effects on the uptake of HIV testing services *(116)*, no significant reductions of HIV incidence have been documented due to mass media programmes operating on their own. Media have, however, played a role in disseminating information and stories on public personalities who are affected by HIV *(115)*.

One key advantage of mass media and multimedia approaches is that they can achieve high coverage in short periods of time. Cost varies significantly, but it can be reduced, such as by working through special agreements with public broadcasters or by training journalists to regularly develop HIV-related stories.

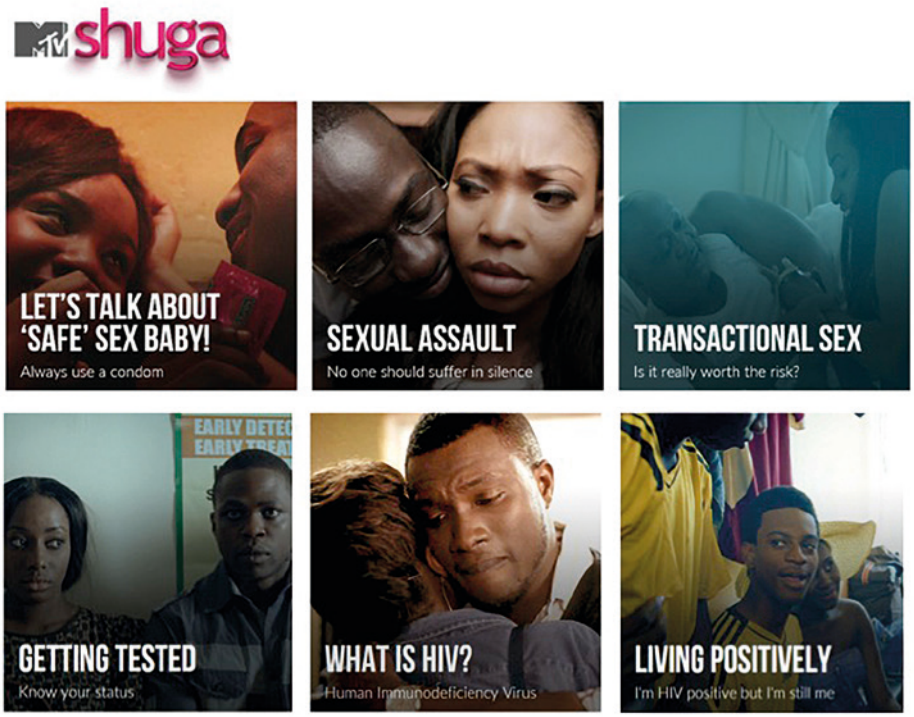
New media and multimedia approaches are particularly relevant for adolescent girls and young women due to the increased availability of smartphones. The following two examples show the potential of such approaches.

The U-report youth SMS progamme in Zambia
An interactive mobile phone and SMS-based programme, U-report provides confidential counselling via SMS and chat. Since its launch, it has reached more than 100 000 young people (also known as "U-Reporters"), of whom more than 60% have interacted with a counsellor *(117)*. There is documented evidence of increased uptake of HIV testing programmes among young people due to the programme *(118)*.

Figure 12
U-report youth SMS programme in Zambia

Shuga TV multimedia programme
An example that combines various types of media is the Shuga TV and radio soap opera, which also maintains an interactive web page and a presence on YouTube. It covers issues of HIV testing, counselling, condom use, positive prevention, gender inequality, sexual violence, transactional sex, alcohol abuse and the role of multiple concurrent partnerships in driving the HIV epidemic. Shuga started in 2009 as a TV series in Kenya; since then, it has been shown in 40 African countries on more than 70 TV stations.

Figure 13
Example of HIV-related themes covered in the Shuga multimedia campaign



Source: http://mtvshuga.com/knowledge/

Table 8

Framework for action: innovative multimedia approaches

Intended effects	**Improve new knowledge, increase/maintain high risk perception, promote demand for and adherence to HIV services (including new products), and give publicity to positive role models.**
Priority populations	Young women and men aged 15–24 years, and older.
Settings for delivery	National media, major phone companies, support distribution through nongovernmental organizations.
Cost estimate (assumed economies of scale)	**UNAIDS internal cost estimates** Radio: US$ 0.07 (low-income countries) to US$ 0.14 (middle-income countries) per exposure. Television: US$ 0.21 (low-income countries) to US$ 0.42 (middle-income countries) per exposure. New media: US$ 0.16 (low-income countries) to US$ 0.32 (middle-income countries) per exposure. **Avenir unit cost database** Television: US$ 0.06–0.48 per exposuren Working with public broadcasters and accessing subsidized rates is recommended to keep costs lown
Other considerations	▪ Focus on a few key messages in the country context. ▪ Ensure the messages do not perpetuate gender stereotypes and that they respect and promote gender equality. ▪ Unlikely to have large effects on norms and behaviours on its own. ▪ Use combined multimedia programmes for specific priority populations and objectives. ▪ Integrate elements of new media into other programmes such as SMS reminders for adherence or mobile phone-based interactive counselling with self-testing.

Cash transfers and social grants

Can cash prevent HIV?

Several new studies show the promising effects of cash transfers and other economic incentives for preventing HIV among girls and young women. Three trials in Malawi *(119)*, the United Republic of Tanzania *(120)* and Lesotho *(121)* found significant links between cash transfers or other incentives and lower STI or HIV prevalence. Two other trials in settings in South Africa—where other social grants are available and schooling is already relatively high and protective against HIV—did not find an effect of cash transfers on HIV, but one study did show an effect on HSV-2 (*122, 123)*.

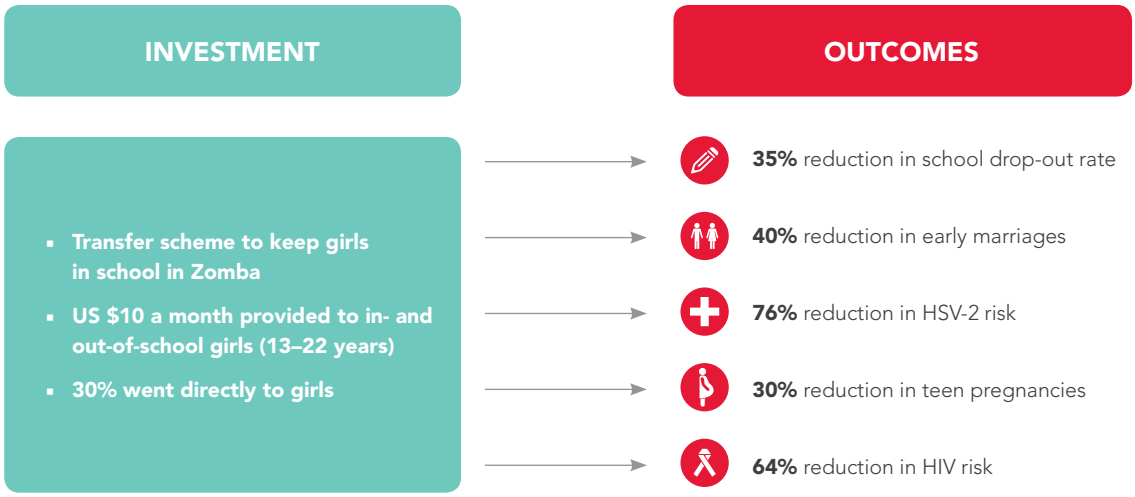
Where are cash transfers likely to work for HIV prevention?

Determining whether or not cash transfers might have an effect on HIV incidence among adolescent girls in a specific setting requires analysis at the country level. Cash transfers are more likely to have an effect on reducing HIV, if they can increase schooling or meet survival needs and thereby prevent adolescent girls from engaging in transactional and age-disparate relationships.

Where adolescent girls and young women make partner choices based on their immediate economic needs, they commonly engage in partnerships with older men for survival or lifestyle goods. Older men with higher HIV prevalence put young women at greater risk than would men of their own age. The Malawi study suggests that this was exactly why cash transfers worked, as young women receiving the transfers chose to have fewer relationships with older men.

Figure 14

Effects of conditional cash transfers in Zomba, Malawi. Results after 18 months among baseline school girls



Source: Remme et al. 2014 *(127)*

The costs of cash transfer programmes are substantial if we only consider the HIV benefit. In Malawi, however, cash transfers also increased school attendance and reduced teenage pregnancy and child marriage. These multiple benefits can make cash transfers cost-effective if other budgets can be pooled to fund them.

In South Africa, an existing publically-funded social grant programme was linked to a 53% reduction in the incidence of transactional sex and a 71% reduction in age-disparate sex *(124)*. New evidence also suggests that adding psychosocial care to provision of cash transfers can maximize HIV-prevention outcomes for young women. Adding programmes promoting good parental supervision to cash transfers and providing free school access increased HIV-prevention behaviours. Combination prevention is likely to be more effective than single provisions *(125, 126)*.

Table 9

Framework for action: cash transfers and social grants

Intended effects	**Reduce sexual risk-taking due to economic pressures, keep girls in school, and reduce age-disparate sex and teenage pregnancy.**
Priority populations	Adolescent girls and young women aged 13 to 22 years.
Settings for delivery	National social transfer programmes.
Cost estimate (assumed economies of scale)	**UNAIDS internal cost estimates** US$ 126 (low-income countries) to US$ 314 (middle-income countries), including cash payment and administrative costs; cost is highly dependent on the country context.
Other considerations	▪ Potential for effects to be studied in the specific country context. ▪ HIV effect is likely strongly linked to whether cash will contribute to keeping girls in school or out of transactional sex. ▪ Possible positive synergies with psychosocial support and care. ▪ Cost-effective when considering an integrated approach to social protection and multiple health and non-health benefits (127). ▪ Cash transfers always to be complemented with other HIV prevention programmes.

Keeping girls in school

How does schooling work for HIV prevention?

Increased school attendance can reduce adolescent girls' risk of acquiring HIV in three different ways. Firstly, being in school can be protective and reduce HIV by reducing early marriage and risky sexual partnerships. For example, HIV prevalence among young women who received one additional year of schooling in Botswana was 17% after ten years compared to 25% among those who did not receive the additional year of schooling *(128)*. In a study in South Africa, the risk of acquiring HIV for women who stayed in school and attended more often was reduced by two thirds *(122)*. Secondly, in advanced HIV epidemics, higher educational attainment is itself associated with reduced HIV prevalence later in life and with safer behaviours *(54)*. Thirdly, keeping girls in school ensures that greater numbers of adolescent girls can access HIV prevention information in the context of comprehensive sexuality education or school-based campaigns.

What is the role of the HIV response?

Globally and in sub-Saharan Africa, progress has been made in achieving gender parity in access to primary education, but in the majority of countries, access to secondary education remains lower for girls than it is for boys *(129)*. As described in the previous section, cash transfers can increase access to schooling for adolescents.

The role of the HIV response in advocating for keeping girls in school will vary by country, but in general, it will primarily be advocacy. In some countries, sufficient momentum on advocacy for increasing access and gender parity in education may have been generated in the education sector itself. In settings where adolescent girls have low access to secondary education, high HIV incidence and limited momentum for keeping girls in school, HIV advocacy needs to support efforts to enhance their access to secondary education. Given the greater vulnerability that orphaned adolescents have to HIV, advocacy also is required to achieve equitable access to schooling for them. These actions will require alliances with partners in the education sector and parental groups, and for concerted investment cases to be presented to ministries of finance and decentralized local authorities.

Other policy changes for HIV prevention among adolescent girls and young women

Certain other policy changes can be conducive to improving HIV programme delivery and outcomes for HIV prevention among adolescent girls and young women. Policy changes on their own will not be sufficient to reduce HIV incidence, but without them, specific subgroups of adolescent girls and young women will remain at high risk of acquiring HIV.

The following are some examples of policy changes in support of HIV prevention for young women.

- **Adopt policies on youth-friendly service provision in health facilities.** Youth-friendly health services can reduce the stigma and discrimination associated with young people

Table 10

Framework for action: keeping girls in school

Intended effects	**Reduced vulnerability through keeping girls in school and thereby reducing risk behaviours, early marriage and teenage pregnancy.**
Priority populations	Adolescent girls and young women in school.
Settings for delivery	Secondary schools and where access to primary education among girls remains low; also primary schools.
Cost estimate	Highly context specific, depending on infrastructure and teacher wage levels.
Other considerations	▪ Use HIV prevention benefits—as well as other health and social benefits of schooling—to advocate for keeping girls in school. ▪ Advocate for equitable access to secondary education for adolescent girls. ▪ Advocate for equitable access to education for orphaned adolescents.

seeking HIV services. Evidence suggests that youth-friendly health facilities can increase access to condoms, contraceptives and HIV testing services among young people, including adolescent girls and young women. Services provided in stand-alone youth centers proved more limited in reach *(130).* Detailed guidance on making health services adolescent friendly is available elsewhere *(131).*

- **Remove legal barriers to adolescents' use of services for HIV and sexual and reproductive health.** By guaranteeing privacy, confidentiality and non-discrimination—and by removing age-related barriers—the uptake of services (including voluntary HIV testing, condoms and contraception) can be increased. More specifically, lowering the age of consent laws for accessing HIV and sexual and reproductive

health services is required to ensure that all adolescents who need services can access them *(132).* This can be accompanied by decriminalizing consensual sexual activity of adolescents.

- **End child marriage.** Legal and policy provisions supported by community engagement and enhanced social protection are required to end marriage under the age of 18 *(133).*
- **Change of housing policies in mines and other work places.** A number of mining companies in South Africa have transformed single-sex compounds for mine workers into homes for family housing to reduce spousal separation *(134).*
- **Enforce gender-based violence legislation.** Through the enforcement of gender-based violence legislation, zero tolerance of gender-based violence can translate into a social norm and gradually into behaviour.
- **Remove policy and legal barriers for key populations.** Policy and legal barriers are critical obstacles for HIV programming among young key populations (including young sex workers, adolescents exploited into sex work, young men who have sex with men, transgender persons and people who inject drugs). Key barriers include criminalization of sex work and same-sex relationships, punitive approaches to drug use, and various forms of discrimination. A detailed analysis of legal barriers for key populations is provided elsewhere *(135).*
- **Consider introducing alcohol-related taxes.** A global systematic review suggests that a doubled alcohol tax would lead to a 35% reduction in alcohol-related mortality and a 6% reduction in STIs, as well as having additional potential for reducing gender-based violence, which may have downstream effects on HIV *(136).* Funds raised through such a tax could be used to co-finance HIV and health programmes or to provide social grants for young women. Feasibility and potential effects need to be assessed on a country-by-country basis.

Integration of HIV, sexual and reproductive health services, and gender-based violence programmes

Although HIV remains the single largest health concern for adolescent girls and young women in high HIV prevalence settings, they face a range of other health issues, including gender-based violence and sexual, reproductive and maternal health needs.

Integration with sexual and reproductive health services

Synergies in programme delivery, increases in service utilization and improvement in health outcomes can be achieved through the integration of HIV with sexual and reproductive health programmes *(137).* Priorities for impacting HIV incidence among adolescent girls and young women include the following:

- HIV testing services, condoms and antiretroviral therapy availability to all sexual

Table 11

Framework for action: other policy change for HIV prevention

Intended effects	**Reduce prevalence and/or effect of structural factors that affect HIV transmission and access to services for young women, including alcohol use, gender-based violence, women not benefitting from inheritance rights and family/spousal separation.**
Priority populations	Policy-makers.
Settings for delivery	Tax system (alcohol tax), law-makers/legal system (gender-based violence, age of consent), health system (youth access to services), business coalitions/public service commissions (employment practices leading to spousal separation).
Cost estimate (assumed economies of scale)	Low direct cost for advocacy; potential additional revenue (alcohol tax).
Other considerations	▪ Potentially time-consuming advocacy. ▪ Need for country-specific assessment of what is relevant and feasible. ▪ Some policy dimensions not fully within comparative advantage of HIV programmes, which will require coalitions with other partners.

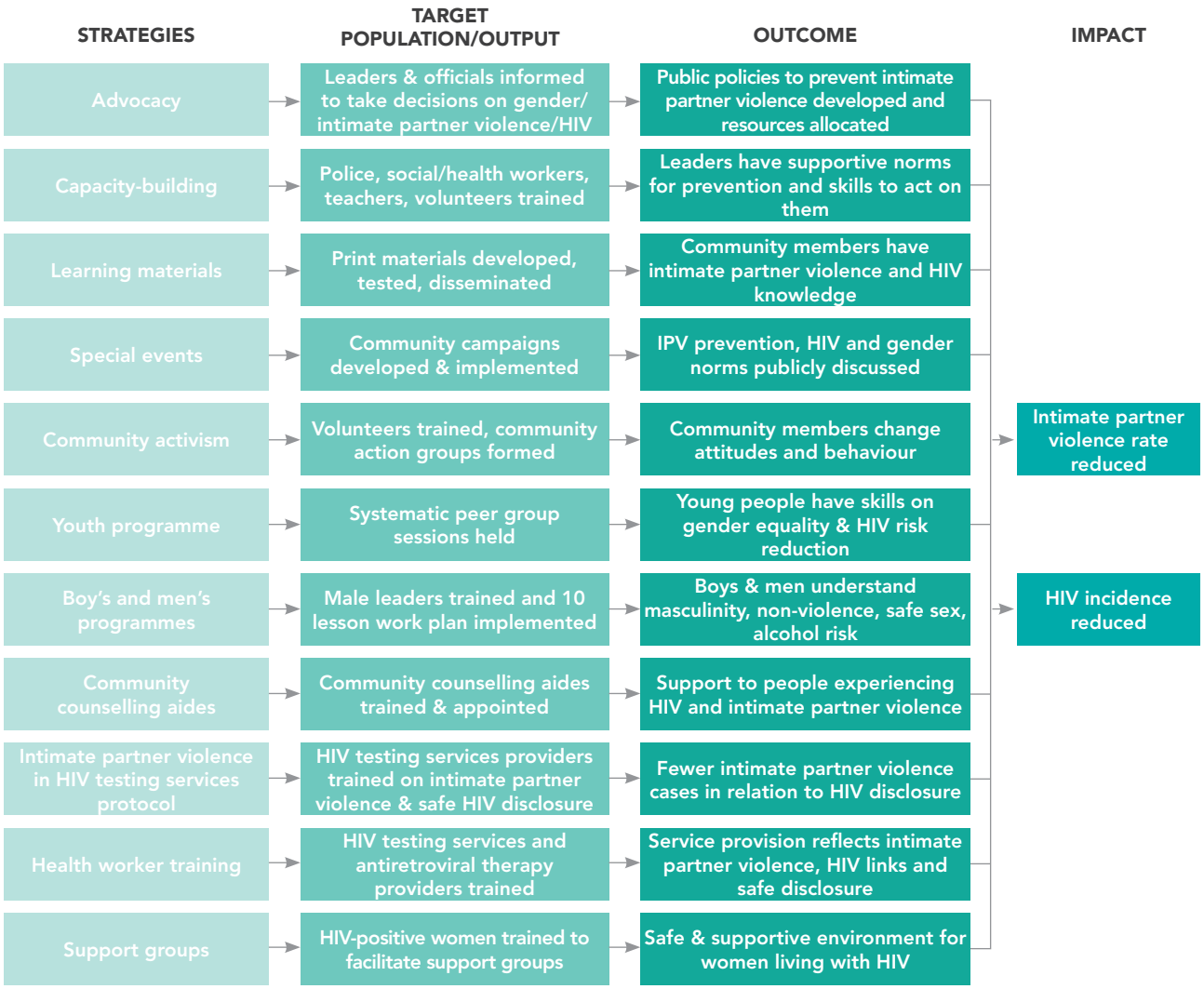
and reproductive health clients in high HIV incidence settings.

- Sexual and reproductive health services—including family planning, infertility treatment and cervical cancer management—available to users of HIV services.
- Enhanced dual protection and dual method use (non-barrier methods plus condoms) through fully integrating HIV prevention into family planning services. In particular, this has been recommended for women who use progestogen-only injectable contraceptives, because it is unclear if these injectables might increase the risk of acquiring HIV *(138)*.
- Integrated community-demand generation and community mobilization around sexual and reproductive health and HIV services, while ensuring that communication priorities are aligned with the disease burden in the country context and the key locations for different health priorities (which may vary).

Detailed guidance on steps and options for linking HIV with SRHR—including the integration of HIV and sexual and reproductive health services—is available at www.srhhivlinkages.org and http://www.integrainitiative.org/.

Figure 15

Logic model of the SHARE (Safe Homes and Respect for Everyone) Pproject in Rakai, Uganda



Source: Wagman et al. 2014 (79).

Integration with gender-based violence programmes

Synergies and integration between HIV and gender-based violence services should be explored in a range of programmes as outlined in a separate UNAIDS publication *(139)*. Such synergies could include the following:

- Integrating economic empowerment and gender training approaches, which can increase women's ownership of property and assets, secure their inheritance rights and train them on gender and power. The IMAGE trial conducted in South Africa, which applied such approaches, and it reduced intimate partner violence by 55% and improved uptake of HIV testing services among young women *(144)*.
- Working with men and boys to transform cultural and social norms related to gender.
- Addressing violence in HIV risk-reduction counselling, HIV testing services, and services to eliminate new HIV infections among children and keep their mothers alive.
- Providing comprehensive post-rape care, including HIV post-exposure prophylaxis (PEP) and emergency contraception to prevent pregnancy.

An example for integrated delivery of HIV and gender-based violence prevention services is the SHARE randomized control trial, which had positive effects on HIV incidence and intimate partner violence as mentioned earlier in this document. Figure 15 provides an overview of the delivery model for the SHARE trial, which reached both women and men *(140)*.

Leadership and role models

Leadership involvement in development programmes is commonly applied as a strategy for community entry to build ownership and improve community understanding, thus opening the way towards sustainability. For HIV prevention in high HIV prevalence locations, particularly among adolescent girls and young women, proactive leadership goes one step further, as leaders are also required as personal role models for how society engages and interacts with young women.

Young female leaders as role models

Female leaders (including adolescent girls and young women) can be role models who confidently engage with men on an equal basis. Since few adolescent girls and young women are in positions of leadership in many country contexts, programmes need to involve young female leaders in programmes as advocates and role models, while also empowering young women to take on leading roles in HIV prevention programmes at the national, subnational and community levels. Media, including social media, offer additional opportunities to amplify the voice of young female leaders in HIV prevention.

A role for male leaders

Male leaders can serve as positive role models for being respectful to young women and reducing

exposure to HIV. In addition, male leaders can be important communication channels for reaching men. Religious, political, sports, music and business leaders can serve as popular opinion leaders to communicate messages on HIV prevention and related gender norms to men. This includes not only the benefits of HIV testing services, antiretroviral therapy and VMMC, but also context-specific behavioural messages on the risk of multiple partnerships or age-disparate sex, because such behaviours also present risks for men given the relatively high HIV prevalence and incidence among young women.

Table 12

Framework for action: leadership and role models

Intended effects	**Change in social and gender norms and positive role models for reduced sexual risk practices, gender-based violence and harmful cultural practices, improved acceptability of HIV services, HIV disclosure, and reduced stigma.**
Priority populations	National leaders (icons, public personalities) and leaders among adolescent girls and young women; local traditional, religious, political and business leaders.
Settings for delivery	National media campaigns and events; existing community events and meetings.
Cost estimate	**UNAIDS internal cost estimate** US$ 126 (in low-income countries) to US$ 251 (in high-income countries) per leader trained. Additional cost for ongoing support to leaders.
Other considerations	▪ Not a stand-alone intervention. ▪ Important to select leaders who are influential and potential role models, and who are seen positively by the intended audience and can authentically communicate the message. ▪ Support and tools on messaging to national, community, religious, business and cultural leaders. ▪ Need for sustained and systematic effort to keep leaders engaged.

Accountability for sustained national programmes and results

Achieving substantial HIV incidence reductions among adolescent girls and young women requires concerted efforts from a group of partners across different sectors. To ensure that all partners make the right commitments and are accountable for delivering on them, two core elements need to be in place: a clear national framework for delivery and a management mechanism to keep the framework and commitment alive by guiding and monitoring implementation.

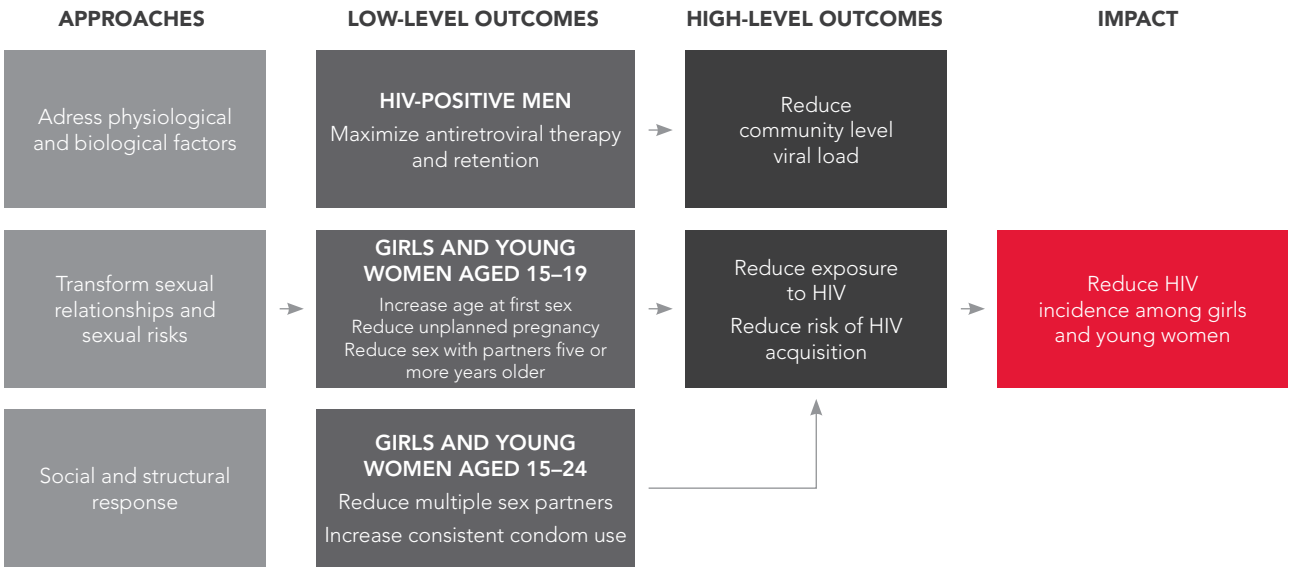
National frameworks for delivery

There are different options when designing a national framework for HIV prevention programmes for adolescent girls and young women. One option is to develop a dedicated strategy for adolescent girls and young women. The alternative is to have an overall national HIV strategy or overall HIV prevention strategy with defined programme packages for different subpopulations, including adolescent girls and young women.

South Africa has developed a national HIV prevention strategy for young women for 2015 to 2019 *(141)*. Figure 16 summarizes the logic model for achieving HIV incidence reduction among young women, while Table 13 summarizes the six priority areas of the strategy and its outcome goals.

Figure 16

Logic model for South Africa's strategy for preventing HIV among girls and young women



Source: SANAC. 2015 *(141)*.

Management systems at the national and subnational level

In order to scale up prevention programmes for young women rapidly, a dynamic approach to programme management is essential. Business-style models with quarterly targets, performance review and strong results orientation will be required. Each country will have to define its national targets and design programmes with the correct mix of activities, scale and intensity to reach its goals.

Key steps in managing prevention programmes for young women

The following points summarize what is key to managing and ensuring accountability in prevention programmes for adolescent girls and young women.

- Develop a pragmatic operational plan:
  - estimate the number of young women in need and map them;

Table 13

Priority strategies and outcome goals for accelerating HIV prevention among girls and young women aged 15–24 in South Africa

Priority strategy	Outcome goal
Increase age at first sex	▪ Reduce the proportion of girls (aged 15–17) and young women (aged 18–19) who report ever having sex by 50% and 25%, respectively, over a period of five years.
Reduce sex with older partners among girls and young women under 20	▪ Reduce the proportion of girls and young women aged 15–19 who have a sexual partner who is five or more years older by 50% over a period of five years.
Reduce pregnancy among girls and young women under 20	▪ Reduce the proportion of girls and young women aged 15–19 who report having been pregnant in the past year by 50% over a period of five years.
Reduce multiple sexual partnerships	▪ Reduce the proportion of sexually active persons aged 15 years and older who report having had two or more sexual partners in the past year by 50% over a period of five years.
Increase consistent condom use among girls and young women aged 15–24	▪ Increase the proportion of girls and young women aged 15–19 who report having used a condom at last sex (within the past year) by 30% over a period of five years.
Increase uptake and retention of antiretroviral therapy among eligible people living with HIV	▪ Increase antiretroviral therapy coverage by initiating at least 80% of eligible people on an annual basis.

  - define the minimum packages of services for young women in different geographical clusters;
  - cost out the minimum service packages;
  - develop a scale-up plan with clear milestones and quarterly and annual targets at the national and subnational levels;
  - establish baselines and set up a rigorous monitoring and impact evaluation framework; and
  - ensure that the plan is compliant with human rights and that it promotes gender equality.
- Establish or adapt programme delivery systems using business-style models for managing performance.
- Develop a culture of quarterly peer review at the subnational level, as well as one of annual review at both the subnational and national levels.
- Roll out delivery to all targeted facilities and outreach teams over the first two years.

- Set coverage targets (e.g. 80% of young women to be reached by end of the second year) and implement programmes accordingly:
  - conduct outcome-level evaluations after the second and fourth years; and
  - undertake rigorous impact evaluations in 2020, 2025 and 2030 (or other years as required by national planning cycles).

Case study: rapid scale-up of prevention programmes in Zimbabwe

Between 2007 and 2012, Zimbabwe's national community-based prevention programme reached over 70% of the intended population aged 18 to 44 years in all districts of the country with different programmes elements. Over 20 million person exposures were recorded and over 700 000 people completed the seven session "Love & Respect" community course (including peer groups of young women aged 15 to 24) *(142)*.

Over the programme period, coverage of HIV testing increased, as did reported condom use with non-regular partners among young women who had been exposed to the programme. What facilitated rapid scale up of the programme was the following:

- a business-style approach of selecting and contracting local nongovernmental organization partners responsible for districts;
- leadership of national, provincial and district AIDS council bodies working with nongovernmental organization partners;
- a structured approach and tools with flexibility for local adaptation and setting of priorities;
- participatory district assessments and planning with local leaders;
- clear quarterly and annual output targets for community facilitators, districts and provinces; and
- quarterly peer review with district programme managers.

Annex

Table of key studies

The options menu proposed in this guidance document is informed by two types of evidence:

- systematic review evidence on HIV prevention programmes in low- and middle-income countries, including those with high HIV prevalence and incidence among adolescent girls and young women; and
- individual high quality studies with experimental or quasi-experimental designs and biological outcome measures that were conducted in countries with high HIV prevalence and incidence among adolescent girls and young women (including studies investigating causes of confirmed population-level HIV incidence declines in high HIV prevalence countries).

This guidance document also considers the findings of similar overall reviews of evidence recently conducted by other partners.

Table 14

Key studies that informed this guide

Overall intervention evidence reviews

Mavedzenge SN, Luecke E, Ross DA. Effective approaches for programming to reduce adolescent vulnerability to HIV infection, HIV risk, and HIV-related morbidity and mortality: a systematic review of systematic reviews. J Acquir Immune Defic Syndr. 2014 Jul 1;66 Suppl 2:S154–69

United States President's Emergency Plan for AIDS Relief (PEPFAR). Preventing HIV in adolescent girls and young women. Guidance for PEPFAR country teams. Washington (DC): PEPFAR; 2015

World Bank, UNFPA. HIV prevention in generalized epidemics. A review of the evidence. Washington (DC) and Johannesburg: 2013

Condoms

Systematic reviews

Giannou FK, Tsiara CG, Nikolopoulos GK, Talias M, Benetou V, Kantzanou M et al. Condom effectiveness in reducing heterosexual HIV transmission: a systematic review and meta-analysis of studies on HIV serodiscordant couples. Expert Rev Pharmacoecon Outcomes Res. 2015 Oct 21:1–11

Holmes KK, Levine R, Weaver M. Effectiveness of condoms in preventing sexually transmitted infections. Bulletin of the World Health Organization 2004;82(6):454–461

Pinkerton SD, Abramson PR. Effectiveness of condoms in preventing HIV transmission. Soc Sci Med. 1997 May;44(9):1303–12

Weller S, Davis K. Condom effectiveness in reducing heterosexual HIV transmission. Cochrane Database Syst Rev. 2002;1:CD003255

Individual studies

Carey RF et al. Effectiveness of latex condoms as a barrier to human immunodeficiency virus-sized particles under conditions of simulated use. Sex Transm Dis. 1992;19:230–4

Johnson LF, Hallett TB, Rehle TM, Dorrington RE. The effect of changes in condom usage and antiretroviral treatment coverage on human immunodeficiency virus incidence in South Africa: a model-based analysis. Journal of the Royal Society Interface. 2012;9(72):1544–1554. doi:10.1098/rsif.2011.0826

Social and behaviour change communication

Systematic reviews

Johnson BT, Scott-Sheldon LAJ, Huedo-Medina TB, Carey MP. Interventions to reduce sexual risk for HIV in adolescents: a meta-analysis of trials, 1985–2008. Archives of Pediatrics and Adolescent Medicine. 2011;165(1):77–84. doi:10.1001/archpediatrics.2010.251

McCoy SI, Kangwende RA, Padian NS. Behavior change interventions to prevent HIV infection among women living in low- and middle-income countries: a systematic review. AIDS Behav. 2010 Jun;14(3):469–82. doi: 10.1007/s10461-009-9644-9

Ross DA. Behavioural interventions to reduce HIV risk: what works? AIDS. 2010 Oct;24 Suppl 4:S4-14

Scott-Sheldon LA, Huedo-Medina TB, Warren MR, Johnson BT, Carey MP. Efficacy of behavioral interventions to increase condom use and reduce sexually transmitted infections: a meta-analysis, 1991 to 2010. J Acquir Immune Defic Syndr. 2011 Dec 15;58(5):489–98

Individual studies

Halperin DT, Mugurungi O, Hallett TB et al. A surprising prevention success: why did the HIV epidemic decline in Zimbabwe? PLoS Med. 2011;8(2):e1000414
Jewkes R, Nduna M, Levin J et al. Impact of Stepping Stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. BMJ. 2008;337:a506. doi:10.1136/bmj.a506
Quigley MA, Kamali A, Kinsman J et al. The impact of attending a behavioural intervention on HIV incidence in Masaka, Uganda. AIDS. 2004 Oct 21;18(15):2055–63
Stoneburner RL, Low-Beer D. Population-level HIV declines and behavioral risk avoidance in Uganda. Science. 2004 Apr 30;304(5671):714–8

Social and behaviour change communication

Systematic reviews

Fonner VA, Armstrong KS, Kennedy CE, O'Reilly KR, Sweat MD. School-based sex education and HIV prevention in low- and middle-Income countries: a systematic review and meta-analysis. In: Vermund SH, ed. PLoS ONE. 2014;9(3):e89692. doi:10.1371/journal.pone.0089692.
Haberland NA. The case for addressing gender and power in sexuality and HIV education: a comprehensive review of evaluation studies. Int Perspect Sex Reprod Health. 2015 Mar;41(1):31–42. doi: 10.1363/4103115
Kirby D, Obasi A, Laris BA. The effectiveness of sex education and HIV education interventions in schools in developing countries. World Health Organ Tech Rep Ser. 2006;938:103–50; discussion 317–41

Individual studies

Dupas, P. Do teenagers respond to HIV risk information? Evidence from a field experiment in Kenya. American Economic Journal: Applied Economics. 2011;3(1):1–34

School-based HIV prevention

Systematic reviews

Fonner VA, Armstrong KS, Kennedy CE, O'Reilly KR, Sweat MD. School-based sex education and HIV prevention in low- and middle-Income countries: a systematic review and meta-analysis. In: Vermund SH, ed. PLoS ONE. 2014;9(3):e89692. doi:10.1371/journal.pone.0089692.
Haberland NA. The case for addressing gender and power in sexuality and HIV education: a comprehensive review of evaluation studies. Int Perspect Sex Reprod Health. 2015 Mar;41(1):31–42. doi: 10.1363/4103115
Kirby D, Obasi A, Laris BA. The effectiveness of sex education and HIV education interventions in schools in developing countries. World Health Organ Tech Rep Ser. 2006;938:103–50; discussion 317–41

Individual studies

Dupas, P. Do teenagers respond to HIV risk information? Evidence from a field experiment in Kenya. American Economic Journal: Applied Economics. 2011;3(1):1–34

Pre-exposure prophylaxis

Systematic reviews

Fonner VA, Dalglish SL, Kennedy CE et al. Effectiveness and safety of oral HIV pre-exposure prophylaxis (PrEP) for all populations: a systematic review and meta-analysis. AIDS. 2016 May 5. [Epub ahead of print]

Individual studies
Baeten JM, Donnell D, Ndase P et al. Antiretroviral prophylaxis for HIV-1 prevention among heterosexual men and women. The New England Journal of Medicine. 2012;367(5):399–410. doi:10.1056/NEJMoa1108524
Thigpen MC, Kebaabetswe PM, Paxton LA et al. Antiretroviral pre-exposure prophylaxis for heterosexual HIV transmission in Botswana. N Engl J Med. 2012;367:423–34

Other programmes for adolescent boys and men

Systematic reviews
Morfaw F, Mbuagbaw L, Thabane L et al. Male involvement in prevention programmes of mother-to-child transmission of HIV: a systematic review to identify barriers and facilitators. Systematic Reviews. 2013;2:5. doi:10.1186/2046-4053-2-5

Individual studies
Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 trial. PLoS Medicine. 2005;2(11):e298. doi:10.1371/journal.pmed.0020298
Bailey R, Moses S, Parker C et al. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. Lancet. 2007;369(9562):643–56
Cohen M, Chen Y, McCauley M, Gamble T, Hosseinipour M, Kumarasamy N et al. Prevention of HIV-1 infection with early antiretroviral therapy. N Engl J Med. 2011;365(6):493–505
Gray R, Kigozo G, Serwadda D et al. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. Lancet. 2007; 369(9562):657–66

Community mobilization

Systematic reviews
Rodriguez-García R et al. Investing in communities achieves results: findings from an evaluation of community responses to HIV and AIDS. Directions in development series. Washington (DC): World Bank; 2013

Individual studies
Gregson S, Nyamukapa C, Schumacher C et al. Evidence for a contribution of the community response to HIV decline in eastern Zimbabwe? AIDS Care. 2013;25(Suppl 1):S88–S96

Mass media

Systematic reviews
Bertrand JT, O'Reilly K, Denison J, Anhang R, Sweat M. Systematic review of the effectiveness of mass communication programmes to change HIV/AIDS-related behaviors in developing countries. Health Educ Res. 2006 Aug;21(4):567–97
Vidanapathirana J, Abramson MJ, Forbes A, Fairley C. Mass media interventions for promoting HIV testing: Cochrane Systematic Review. Int J Epidemiol. 2006 Apr;35(2):233–4

Cash transfers

Systematic reviews
Pettifor A, MacPhail C, Nuyen N, Rosenberg M. Can money prevent the spread of HIV? A review of cash payments for HIV prevention. AIDS Behav 2012;16(7):1729–38

Individual studies
Baird S, Chirwa E, McIntosh C, Ozler B. The short-term impacts of a schooling conditional cash transfer programme on the sexual behaviour of young women. Health Econ. 2010;19 Suppl:55–68
Björkman Nyqvist M, Corno L, de Walque D, Svensson J. Using lotteries to incentivize safer sexual behavior. Evidence from a randomized controlled trial on HIV prevention. World Bank Policy Research Working Paper 7215. Washington (DC): World Bank; 2015
De Walque D, Dow W, Nathan R, Abdul R, Abilahi F, Gong E et al. Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania. BMJ Open. 2012;2:e000747
Karim QA. Unpacking the results of HPTN 068: a randomized controlled cash transfer trial to prevent HIV infection in young women in South Africa. CAPRISA 007 matched-pair cluster randomized controlled trial. Presentation
Pettifor A. Unpacking the results of HPTN 068: a randomized controlled cash transfer trial to prevent HIV infection in young women in South Africa Presentation (http://strive.lshtm.ac.uk/sites/strive.lshtm.ac.uk/files/HIV%20prevention%20for%20young%20South%20African%20women%20Lessons%20from%20Swa%20Koteka.pdf)

Keeping girls in school

Systematic reviews
Hargreaves JR, Bonell CP, Boler T et al. Systematic review exploring time trends in the association between educational attainment and risk of HIV infection in sub-Saharan Africa. AIDS. 2008 Jan 30;22(3):403–14. doi: 10.1097/QAD.0b013e3282f2aac3

Individual studies
De Neve JW, Fink G, Subramanian SV, Moyo S, Bor J. Length of secondary schooling and risk of HIV infection in Botswana: evidence from a natural experiment. Lancet Glob Health. 2015 Aug;3(8):e470–7. doi: 10.1016/S2214-109X(15)00087-X

Other policy changes

Systematic reviews
Global Commission on HIV and the Law. Risks, rights and health. New York: Secretariat, Global Commission on HIV and the Law; 2012
Wagenaar AC, Tobler AL, Komro KA. Effects of alcohol tax and price policies on morbidity and mortality: a systematic review. American Journal of Public Health. 2010;100(11):2270–2278
Zuurmond MA, Geary RS, Ross DA. The effectiveness of youth centers in increasing use of sexual and reproductive health services: a systematic review. Stud Fam Plann. 2012 Dec;43(4):239–54. doi: 10.1111/j.1728-4465.2012.00324.x

Integration with sexual and reproductive health and gender-based violence programmes

Systematic reviews
Chandra-Mouli V, Lane C, Wong S. What does not work in adolescent sexual and reproductive health: a review of evidence on interventions commonly accepted as best practices. Global Health: Science and Practice. 2015;3(3):333–340. doi:10.9745/GHSP-D-15-00126
Kennedy CE, Spaulding AB, Brickley DB et al. Linking sexual and reproductive health and HIV interventions: a systematic review. Journal of the International AIDS Society. 2010;13:26. doi:10.1186/1758-2652-13-26

Individual studies
Wagman JA, Gray RH, Campbell JC et al. Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort. Lancet Glob Health. 2015;3(1):e23–e33. doi:10.1016/S2214-109X(14)70344-4

Systematic reviews on epidemic situation of adolescent girls and young women in high incidence countries

Dellar RC, Dlamini S, Karim QA. Adolescent girls and young women: key populations for HIV epidemic control. Journal of the International AIDS Society 2015;18(2Suppl 1):19408. doi:10.7448/IAS.18.2.19408
Fleischman J, Peck K. Addressing HIV risk in adolescent girls and young women. Washington (DC): Centre for Strategic and International Studies; 2015
Harrison A, Colvin CJ, Kuo C, Swartz A, Lurie M. Sustained high HIV incidence in young women in southern Africa: social, behavioral and structural factors and emerging intervention approaches. Current HIV/AIDS Reports. 2015;12(2):207–215. doi:10.1007/s11904-015-0261-0
Idele P, Gillespie A, Porth T et al. Epidemiology of HIV and AIDS among adolescents: current status, inequities, and data gaps. J Acquir Immune Defic Syndr. 2014 Jul 1;66 Suppl 2:S144–53. doi: 10.1097/QAI.0000000000000176
Li Y, Marshall CM, Rees HC, Nunez A, Ezeanolue EE, Ehiri JE. Intimate partner violence and HIV infection among women: a systematic review and meta-analysis. Journal of the International AIDS Society. 2014;17(1):18845. doi:10.7448/IAS.17.1.18845
Naicker N, Kharsany AB, Werner L et al. Risk factors for HIV acquisition in high risk women in a generalised epidemic setting. AIDS and Behavior 2015;19(7):1305–1316. doi:10.1007/s10461-015-1002-5
Operario D, Underhill K, Chuong C, Cluver L. HIV infection and sexual risk behaviour among youth who have experienced orphanhood: systematic review and meta-analysis. Journal of the International AIDS Society. 2011;14:25. doi:10.1186/1758-2652-14-25
Ramjee G, Daniels B. Women and HIV in sub-Saharan Africa. AIDS Research and Therapy. 2013;10:30. doi:10.1186/1742-6405-10-30
Stoebenau K, Wamoyi J, Holmes A et al. The role of transactional sex in adolescent girls' and young women's risk of HIV in sub-Saharan Africa. London; 2016 (submitted)

Table 15

Related policy and technical guidance

HIV programmes for adolescents and young people

Inter-Agency Task Team on HIV and Young People. Global guidance brief: HIV interventions for young people. New York: UNFPA; 2008
MenEngage Alliance. Elements for a platform of action to engage men and adolescent boys in the HIV response and Fast-Track the end of AIDS. In: MenEngage Alliance [website]. 2016 (http://menengage.org/elements)
UNAIDS and The African Union. Empower young women and adolescent girls. Fast-Tracking the end of the AIDS epidemic in Africa. Geneva: UNAIDS; 2015
UNICEF. Opportunity in crisis. Preventing HIV from early adolescence to young adulthood. New York: UNICEF; 2011
UNICEF. Strengthening the adolescent component of national HIV programmes through country assessments. New York: UNICEF; 2015
WHO. HIV and adolescents: guidance for HIV testing and counselling and care for adolescents living with HIV. Guidance document. Geneva: WHO; 2013
WHO. Voluntary medical male circumcision 2021. A gateway to adolescent boys' and young men's health (draft). Geneva: WHO; 2016

Young key populations
Interagency Working Group on Key Populations. HIV and young men having sex with men: technical briefs. New York, Geneva; 2015
Interagency Working Group on Key Populations. HIV and young people who inject drugs. New York and Geneva; 2015
Interagency Working Group on Key Populations. HIV and young people who sell sex. New York and Geneva; 2015
Interagency Working Group on Key Populations. HIV and young transgender people: technical briefs. New York and Geneva; 2015

Health programmes for adolescents and young people

UNESCO. International technical guidance on sexuality education. An evidence-informed approach for schools, teachers and health educators. Paris: UNESCO; 2009
UNICEF. Ending child marriage. Progress and prospects. New York: UNICEF; 2013
WHO. Health for the world's adolescents: a second chance in the second decade. Geneva: WHO; 2014
WHO. Making health services adolescent friendly. Developing national quality standards for adolescent-friendly health services. Geneva: WHO; 2012

HIV prevention programming (overall)

UNAIDS. Fast-Tracking combination prevention. Towards reducing new HIV infections to fewer than 500 000 by 2020. Geneva: UNAIDS; 2015
UNAIDS. Gender-responsive HIV programming for women and girls. Guidance note. Geneva: UNAIDS; 2014
UNFPA. Comprehensive condom programming: a strategic response to HIV and AIDS. New York: UNFPA; 2015
WHO. Consolidated guidelines on HIV testing services. Geneva: WHO; 2015
WHO. Technical update on pre-exposure prophylaxis (PrEP). Geneva: WHO; 2015
WHO, UNAIDS. 16 Ideas for addressing violence against women in the context of the HIV epidemic. Geneva: WHO; 2016
WHO, UNFPA, UNAIDS, NSWP, World Bank, UNDP. Implementing comprehensive HIV/STI programmes with sex workers: practical approaches from collaborative interventions. Geneva, New York, Washington (DC); 2013

References

1. UNAIDS 2016 Estimates. Geneva: UNAIDS; 2016. (http://www.unaids.org/en/resources/documents/2016/HIV_estimates_with_uncertainty_bounds_1990-2015, accessed 7 July 2016).

2. HIV and adolescents: guidance for HIV testing and counselling and care for adolescents living with HIV. Guidance document. Geneva: WHO; 2013.

3. Health for the world's adolescents: a second chance in the second decade. Geneva: WHO; 2014.

4. Inter-Agency Task Team on HIV and Young People. Global guidance brief: HIV interventions for young people. New York: UNFPA; 2008.

5. UNAIDS and The African Union. Empower young women and adolescent girls. Fast-Tracking the end of the AIDS epidemic in Africa. Geneva: UNAIDS; 2015.

6. Elements for a platform of action to engage men and adolescent boys in the HIV response and Fast-Track the end of AIDS. In: Men Engage Alliance [website]. 2016 (http://menengage.org/elements, accessed 7 July 2016).

7. Voluntary medical male circumcision 2021. A gateway to adolescent boys' and young men's health (draft). Geneva: WHO; 2016.

8. Comprehensive condom programming: guide for resource mobilization and country programming. New York: UNFPA; 2011 (http://www.unfpa.org/sites/default/files/pub-pdf/CCP.pdf, accessed 7 July 2016).

9. Consolidated guidelines on HIV testing services. Geneva: WHO; 2015 (http://apps.who.int/iris/bitstream/10665/179870/1/9789241508926_eng.pdf, accessed 7 July 2016).

10. Technical update on pre-exposure prophylaxis (PrEP). Geneva: WHO; 2015.

11. Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. Geneva: WHO; 2014.

12. WHO, UNFPA, UNAIDS, NSWP, World Bank, UNDP. Implementing comprehensive HIV/STI programmes with sex workers: practical approaches from collaborative interventions. Geneva: WHO; 2013 (http://apps.who.int/iris/bitstream/10665/90000/1/9789241506182_eng.pdf?ua=1, accessed 7 July 2016).

13. Interagency Working Group on Key Populations. HIV and young people who sell sex. Geneva: WHO; 2015 (http://www.unfpa.org/publications/hiv-and-young-people-who-sell-sex, accessed 7 July 2016).

14. Interagency Working Group on Key Populations. HIV and young people who inject drugs. Geneva: WHO; 2015 (http://www.unaids.org/sites/default/files/media_asset/2015_young_people_drugs_en.pdf, accessed 7 July 2016).

15. Interagency Working Group on Key Populations. HIV and young transgender people: technical briefs. Geneva: WHO; 2015 (http://www.unfpa.org/publications/hiv-and-young-transgender-people, accessed 7 July 2016).

16. Interagency Working Group on Key Populations. HIV and young men having sex with men: technical briefs. Geneva: WHO; 2015 (http://www.unfpa.org/publications/hiv-and-young-men-who-have-sex-men, accessed 7 July 2016).

17. UNAIDS 2016 Estimates. Geneva: UNAIDS; 2016. (http://www.unaids.org/en/resources/documents/2016/HIV_estimates_with_uncertainty_bounds_1990-2015, accessed 7 July 2016).

18. Case KK, Ghys PD, Gouws E et al. Understanding the modes of transmission model of new HIV infection and its use in prevention planning. Bulletin of the World Health Organization. 2012;90(11):831–838A. doi:10.2471/BLT.12.102574.

19. Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Zungu N et al. South African National HIV prevalence, incidence and behaviour survey 2012. Cape Town: HSRC Press; 2014.

20. Swaziland Ministry of Health and ICAP. Swaziland, HIV Incidence Measurement Survey (SHIMS) first findings report, November 2012. Mbabane (Swaziland) (http://files.icap.columbia.edu/shims/files/uploads/SHIMS_First_Findings_Report_w_Cover_2012.pdf, accessed 7 July 2016).

21. Dellar RC, Dlamini S, Karim QA. Adolescent girls and young women: key populations for HIV epidemic control. Journal of the International AIDS Society. 2015;18(2Suppl 1):19408. doi:10.7448/IAS.18.2.19408.

22. Population Council. Addressing sexual violence and HIV risk among married adolescent girls in rural Nyanza, Kenya. Brief no. 19. 2011 (http://www.popcouncil.org/uploads/pdfs/TABriefs/19_KenyaMarriedAdol.pdf, accessed 7 July 2016).

23. SADC. Expert think tank meeting on HIV prevention in high-prevalence countries in southern Africa. Gabarone (Botswana): Southern African Development Community; 2006 (http://data.unaids.org/pub/Report/2006/20060601_sadc_meeting_report_en.pdf, accessed 7 July 2016).

24. Idele P, Gillespie A, Porth T et al. Epidemiology of HIV and AIDS among adolescents: current status, inequities, and data gaps. J Acquir Immune Defic Syndr. 2014 Jul 1;66 Suppl 2:S144–53. doi: 10.1097/QAI.0000000000000176.

25. Fleischman J, Peck K. Addressing HIV risk in adolescent girls and young women. Washington (DC): Centre for Strategic and International Studies; 2015.

26. Naicker N, Kharsany AB, Werner L et al. Risk factors for HIV acquisition in high-risk women in a generalised epidemic setting. AIDS and Behaviour. 2015;19(7):1305–1316. doi:10.1007/s10461-015-1002-5.

27. Harrison A, Colvin CJ, Kuo C, Swartz A, Lurie M. Sustained high HIV incidence in young women in southern Africa: social, behavioural and structural factors and emerging intervention approaches. Current HIV/AIDS reports. 2015;12(2):207–215. doi:10.1007/s11904-015-0261-0.

28. Maughan-Brown B, Kenyon C, Lurie MN. Partner age differences and concurrency in South Africa: implications for HIV-infection risk among young women. AIDS and Behaviour. 2014;18(12):2469–76. doi: 10.1007/s10461-014-0828-6.

29. Lopman B, Nyamukapa C, Mushati P, Mupambireyi Z, Mason P, Garnett GP et al. HIV incidence in 3 years of follow-up of a Zimbabwe cohort—1998–2000 to 2001–03: contributions of proximate and underlying determinants to transmission. Int J Epidemiol. 2008 Feb;37(1):88–105. doi: 10.1093/ije/dym255.

30. HIV prevalence estimates from the demographic and health surveys. Calverton (Maryland): ICF International; 2012.

31. Kerrigan D, Wirtz A, Semini I, N'Jie N, Stanciole A, Butler J et al. The global HIV epidemics among sex workers. Washington (DC): The World Bank; November 2012.

32. Onyango MA, Adu-Sarkodie Y, Agyarko-Poku T et al. "It's all about making a life": poverty, HIV, violence, and other vulnerabilities faced by young female sex workers in Kumasi, Ghana. J Acquir Immune Defic Syndr. 2015 Mar 1;68 Suppl 2:S131–7. doi: 10.1097/QAI.0000000000000455.

33. Stoebenau K, Wamoyi J, Holmes A et al. The role of transactional sex in adolescent girls' and young women's risk of HIV in sub-Saharan Africa. London; 2016 (forthcoming).

34. Multi-country study on women's health and domestic violence against women: summary report of initial results on prevalence, health outcomes and women's responses. Geneva: WHO; 2005 (http://www.who.int/gender/violence/who_multicountry_study/summary_report/summary_report_English2.pdf; accessed 7 July 2016).

35. Zimbabwe National AIDS Council, UNFPA. National behaviour change survey 2007/8. Harare (Zimbabwe): Zimbabwe National AIDS Council; 2009.

36. Corneli A, Wang M, Agot K et al. Perception of HIV risk and adherence to a daily, investigational pill for HIV prevention in FEM-PrEP. J Acquir Immune Defic Syndr. 2014 Dec 15;67(5):555–63. doi: 10.1097/QAI.0000000000000362.

37. Cederbaum JA, Gilreath TD, Barman-Adhikari A. Perceived risk and condom use among adolescents in sub-Saharan Africa: a latent class analysis. Afr J Reprod Health. 2014 Dec;18(4):26–33.

38. Pettifor AE, Hudgens MG, Levandowski BA, Rees HV, Cohen MS. Highly efficient HIV transmission to young women in South Africa. AIDS. 2007 Apr 23;21(7):861–5.

39. Boily MC, Baggaley RF, Wang L et al. Heterosexual risk of HIV-1 infection per sexual act: a systematic review and meta-analysis of observational studies. The Lancet. 2009;9(2):118–129. doi:10.1016/S1473-3099(09)70021-0.

40. Pomerantz RJ, de la Monte SM, Donegan SP, Rota TR, Vogt MW, Craven DE et al. Human immunodeficiency virus (HIV) infection of the uterine cervix. Ann Intern Med. 1988 Mar;108(3):321–7.

41. Jean K, Puren A, Cutler E et al. Level of viral suppression and the cascade of HIV care in a South African semi-urban setting in 2012. AIDS. 2016 May 9. Epub ahead of print.

42. Abu-Raddad LJ, Barnabas RV, Janes H et al. Have the explosive HIV epidemics in sub-Saharan Africa been driven by higher community viral load? AIDS. 2013 Sep 24;27(15):2494–6. doi: 10.1097/01.aids.0000432463.23508.a2.

43. Weiss HA, Quigley MA, Hayes RJ. Male circumcision and risk of HIV infection in sub-Saharan Africa: a systematic review and meta-analysis. AIDS. 2000 Oct 20;14(15):2361–70.

44. Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R et al. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 trial. PLoS Medicine. 2005;2(11):e298. doi:10.1371/journal.pmed.0020298.

45. Bailey R, Moses S, Parker C et al. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomized controlled trial. Lancet. 2007;369(9562):643–56.

46. Gray R, Kigozo G, Serwadda D et al. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomized trial. Lancet. 2007;369(9562):657–66.

47. Nagelkerke NJ, Moses S, de Vlas SJ, Bailey RC. Modelling the public health impact of male circumcision for HIV prevention in high prevalence areas in Africa. BMC Infectious Diseases. 2007;7:16. doi:10.1186/1471-2334-7-16.

48. Low N, Chersich MF, Schmidlin K et al. Intravaginal practices, bacterial vaginosis, and HIV infection in women: individual participant data meta-analysis. In: Mofenson L, editor. PLoS Medicine. 2011;8(2):e1000416. doi:10.1371/journal.pmed.1000416.

49. Ramjee G, Daniels B. Women and HIV in sub-Saharan Africa. AIDS Research and Therapy. 2013;10:30. doi:10.1186/1742-6405-10-30.

50. Sexton J, Garnett G, Røttingen JA. Meta-analysis and meta-regression in interpreting study variability in the impact of sexually transmitted diseases on susceptibility to HIV infection. Sex Transm Dis. 2005 Jun;32(6):351–7.

51. Johnson LF, Lewis DA. The effect of genital tract infections on HIV-1 shedding in the genital tract: a systematic review and meta-analysis. Sex Transm Dis. 2008 Nov;35(11):946–59. doi: 10.1097/OLQ.0b013e3181812d15.

52. Soul City Institute. Multiple and concurrent sexual partnerships in southern Africa. A ten country research report. Johannesburg: Soul City Institute; 2011.

53. Shannon K, Leiter K, Phaladze N et al. Gender inequity norms are associated with increased male-perpetrated rape and sexual risks for HIV infection in Botswana and Swaziland. In: Kissinger P, editor. PLoS ONE. 2012;7(1):e28739. doi:10.1371/journal.pone.0028739.

54. Hargreaves JR, Bonell CP, Boler T et al. Systematic review exploring time trends in the association between educational attainment and risk of HIV infection in sub-Saharan Africa. AIDS. 2008 Jan 30;22(3):403–14. doi: 10.1097/QAD.0b013e3282f2aac3.

55. De Neve JW, Fink G, Subramanian SV, Moyo S, Bor J. Length of secondary schooling and risk of HIV infection in Botswana: evidence from a natural experiment. Lancet Glob Health. 2015 Aug;3(8):e470–7. doi: 10.1016/S2214-109X(15)00087-X.

56. Weine SM, Kashuba AB. Labor migration and HIV risk: a systematic review of the literature. AIDS and Behaviour. 2012;16(6):1605–1621. doi:10.1007/s10461-012-0183-4.

57. Chandra-Mouli V, McCarraher DR, Phillips SJ, Williamson NE, Hainsworth G. Contraception for adolescents in low- and middle-income countries: needs, barriers, and access. Reproductive Health. 2014;11:1. doi:10.1186/1742-4755-11-1.

58. Operario D, Underhill K, Chuong C, Cluver L. HIV infection and sexual risk behaviour among youth who have experienced orphanhood: systematic review and meta-analysis. Journal of the

International AIDS Society. 2011;14:25. doi:10.1186/1758-2652-14-25.

59. LeClair EA. Childhood sexual abuse and social functioning: a systematic review of reviews. Honors Scholar Theses. Paper 253. Connecticut, 2012 (http://digitalcommons.uconn.edu/srhonors_theses/253, accessed 7 July 2016).

60. Li Y, Marshall CM, Rees HC, Nunez A, Ezeanolue EE, Ehiri JE. Intimate partner violence and HIV infection among women: a systematic review and meta-analysis. Journal of the International AIDS Society. 2014;17(1):18845. doi:10.7448/IAS.17.1.18845.

61. Gender-responsive HIV programming for women and girls. Guidance note. Geneva: UNAIDS; 2014 (http://www.unaids.org/sites/default/files/media_asset/genderresponsiveHIVprogramming_en.pdf, accessed 7 July 2016).

62. A new investment framework for the global HIV response. UNAIDS issues brief. Geneva: UNAIDS; 2011.

63. Fast-Tracking combination prevention. Towards reducing new HIV infections to fewer than 500 000 by 2020. Geneva: UNAIDS; 2015.

64. Mavedzenge SN, Luecke E, Ross DA. Effective approaches for programming to reduce adolescent vulnerability to HIV infection, HIV risk, and HIV-related morbidity and mortality: a systematic review of systematic reviews. J Acquir Immune Defic Syndr. 2014 Jul 1;66 Suppl 2:S154–69. doi: 10.1097/QAI.0000000000000178.

65. World Bank, UNFPA. HIV prevention in generalized epidemics. A review of the evidence. Washington (DC) and Johannesburg; 2013.

66. Chandra-Mouli V, Lane C, Wong S. What does not work in adolescent sexual and reproductive health: a review of evidence on interventions commonly accepted as best practices. Global Health: Science and Practice. 2015;3(3):333–340. doi:10.9745/GHSP-D-15-00126.

67. Preventing HIV in adolescent girls and young women. Guidance for PEPFAR country teams. Washington (DC): United States President's Emergency Plan for AIDS Relief (PEPFAR); 2015.

68. WHO, UNAIDS. Addressing violence against women and HIV/AIDS: what works? Geneva: WHO; 2010.

69. Anderson SJ, Cherutich P, Kilonzo N, Cremin I, Fecht D, Kimanga D et al. Maximising the effect of combination HIV prevention through prioritisation of the people and places in greatest need: a modelling study. Lancet. 2014;384(9939):249–56. doi: 10.1016/S0140-6736(14)61053-9.

70. Carey RF et al. Effectiveness of latex condoms as a barrier to human immunodeficiency virus-sized particles under conditions of simulated use. Sex Transm Dis. 1992;19:230–4.

71. Information note on effectiveness of condoms in preventing sexually transmitted infections including HIV. Geneva: WHO and UNAIDS; 2001.

72. AccessRH product catalogue. In: UNFPA product catalog [website]. Copenhagen: UNFPA; 2016 (https://www.myaccessrh.org/products, accessed 7 April 2016).

73. Comprehensive condom programming: a guide for resource mobilization and country programming. New York: UNFPA; 2011 (http://www.unfpa.org/publications/comprehensive-condom-programming, accessed 8 July 2016).

74. ICF International. The Demographic and Health Survey Program. Statcompiler. Rockville; 2016 (http://www.statcompiler.com/, accessed 8 July 2016).

75. Fladseth K, Gafos M, Newell ML, McGrath N. The impact of gender norms on condom use among HIV-positive adults in KwaZulu-Natal, South Africa. In: Hahn S, editor. PLoS ONE. 2015;10(4):e0122671. doi:10.1371/journal.pone.0122671.

76. Stoneburner RL, Low-Beer D. Population-level HIV declines and behavioral risk avoidance in Uganda. Science. 2004 Apr 30;304(5671):714–8.

77. Muchini B, Benedikt C, Gregson S et al. Local perceptions of the forms, timing and causes of behavior change in response to the AIDS epidemic in Zimbabwe. AIDS and Behaviour. 2011;15(2):487–498. doi:10.1007/s10461-010-9783-z.

78. Jewkes R, Nduna M, Levin J et al. Impact of Stepping Stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. BMJ. 2008;337:a506. doi:10.1136/bmj.a506.

79. Wagman JA, Gray RH, Campbell JC et al. Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort. Lancet Glob Health. 2015;3(1):e23–e33. doi:10.1016/S2214-109X(14)70344-4.

80. Abramsky T, Devries K, Kiss L et al. Findings from the SASA! Study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in Kampala, Uganda. BMC Medicine. 2014;12:122. doi:10.1186/s12916-014-0122-5.

81. Taylor M, Dlamini SB, Meyer-Weitz A et al. Changing sexual behaviour to reduce HIV transmission: a multi-faceted approach to HIV prevention and treatment in a rural South African setting. AIDS Care. 2010 Nov;22(11):1395–402. doi: 10.1080/09540121003720960.

82. Buzdugan R, Benedikt C, Langhaug L et al. Population-level impact of Zimbabwe's National Behavioural Change Programme. J Acquir Immune Defic Syndr. 2014 Dec 15;67(5):e134–41. doi: 10.1097/QAI.0000000000000361.

83. Soul City Institute. The One Love Campaign in southern Africa. What has been achieved so far? Interim Evaluation. Johannesburg: Soul City Institute; 2012.

84. Unit cost database. In: Avenir Health [website]. Glastonbury (UK): Avenir Health; c2010 (http://www.avenirhealth.org/policytools/UC/, accessed 8 July 2016).

85. Michaels-Igbokwe C, Abramsky T, Devries K, Michau L, Musuya T, Watts C. Cost and cost-effectiveness analysis of a community mobilisation intervention to reduce intimate partner violence in Kampala, Uganda. BMC Public Health. 2016;16:196. doi:10.1186/s12889-016-2883-6.

86. USAID Health Policy Initiative. Cost of behavior change communication interventions for HIV prevention in Namibia. Mass media, community mobilization and interpersonal communications.

Washington (DC): Futures Group, Health Policy Initiative, Costing Task Order; 2013.

87. International technical guidance on sexuality education. An evidence-informed approach for schools, teachers and health educators. Paris: UNESCO; 2009.

88. Kirby D, Obasi A, Laris BA. The effectiveness of sex education and HIV education interventions in schools in developing countries. World Health Organ Tech Rep Ser. 2006;938:103–50; discussion 317–41.

89. Fonner et al. School-based sex education and HIV prevention in low- and middle-income countries: a systematic review and meta-analysis. PLoS ONE. 2014;9(3):e89692.

90. Emerging evidence, lessons and practice in comprehensive sexuality education. A global review. Paris and New York: UNESCO and UNFPA: 2015.

91. Dupas P. Do teenagers respond to HIV risk information? Evidence from a field experiment in Kenya. American Economic Journal: Applied Economics. 2011;3(1):1–34.

92. Haberland NA. The case for addressing gender and power in sexuality and HIV education: a comprehensive review of evaluation studies. Int Perspect Sex Reprod Health. 2015 Mar;41(1):31–42. doi: 10.1363/4103115.

93. Underhill K, Operario D, Montgomery P. Abstinence-only programs for HIV infection prevention in high-income countries. Cochrane Database Syst Rev. 2007 Oct 17;(4):CD005421.

94. Hallett TB, Gregson S, Lewis JJ, Lopman BA, Garnett GP. Behaviour change in generalised HIV epidemics: impact of reducing cross-generational sex and delaying age at sexual debut. Sex Transm Infect. 2007 Aug;83 Suppl 1:i50–54. Epub 2007 Feb 21.

95. Luke N. Confronting the "sugar daddy" stereotype: age and economic asymmetries and risky sexual behavior in urban Kenya. International Perspectives on Sexual and Reproductive Health. 2005;Volume 31(1):6–14.

96. Fonner VA, Dalglish SL, Kennedy CE et al. Effectiveness and safety of oral HIV pre-exposure prophylaxis (PrEP) for all populations: a systematic review and meta-analysis. AIDS. 2016 May 5. Epub ahead of print.

97. WHO expands recommendation on oral pre-exposure prophylaxis of HIV infection (PrEP). Policy brief. Geneva: WHO; 2015 (http://www.who.int/entity/hiv/pub/prep/policy-brief-prep-2015/en/index.html, accessed 8 July 2016).

98. Baeten JM, Donnell D, Ndase P et al. Antiretroviral prophylaxis for HIV-1 prevention among heterosexual men and women. The New England Journal of Medicine. 2012;367(5):399–410. doi:10.1056/NEJMoa1108524.

99. Thigpen MC, Kebaabetswe PM, Paxton LA et al. Antiretroviral pre-exposure prophylaxis for heterosexual HIV transmission in Botswana. N Engl J Med. 2012; 367:423–34.

100. Corneli AL, Deese J, Wang M et al. FEM-PrEP: adherence patterns and factors associated with adherence to a daily oral study product for pre-exposure prophylaxis. Journal of Acquired Immune Deficiency Syndromes. 2014;66(3):324–331. doi:10.1097/QAI.0000000000000158.

101. Marrazzo JM, Ramjee G, Richardson BA et al. Tenofovir-based pre-exposure prophylaxis for HIV Infection among African women. The New England Journal of Medicine. 2015;372(6):509–518. doi:10.1056/NEJMoa1402269.

102. Roberts ST, Haberer J, Celum C et al. Intimate partner violence and adherence to HIV pre-exposure prophylaxis (PrEP) in African women in HIV serodiscordant relationships: a prospective cohort study. J Acquir Immune Defic Syndr. 2016 May 26. Epub ahead of print.

103. Women living with HIV speak out against violence. Geneva: UNAIDS; 2014 (http://www.unaids.org/en/resources/documents/2014/womenlivingwithhivspeakout, accessed 8 July 2016).

104. News. In: Iyeza Health [website]. Cape Town: Iyeza Health; 2015 (http://www.iyezahealth.co.za/news/, accessed 8 July 2016).

105. Morfaw F, Mbuagbaw L, Thabane L et al. Male involvement in prevention programs of mother-to-child transmission of HIV: a systematic review to identify barriers and facilitators. Systematic Reviews. 2013;2:5. doi:10.1186/2046-4053-2-5.

106. Mohlala BKF, Boily MC, Gregson S. The forgotten half of the equation: randomized controlled trial of a male invitation to attend couple voluntary counselling and testing. AIDS. 2011;25(12):1535–1541. doi:10.1097/QAD.0b013e328348fb85.

107. Peltzer K, Simbayi L, Banyini M, Kekana Q. HIV risk reduction intervention among medically circumcised young men in South Africa: a randomized controlled trial. Int J Behav Med. 2012 Sep;19(3):336–41. doi: 10.1007/s12529-011-9171-8.

108. Strengthening the adolescent component of national HIV programmes through country assessments. New York: UNICEF; 2015 (http://www.youngpeopleandhiv.org/files/Guidance_on_Country_Assessments_Draft_9_1.pdf, accessed 8 July 2016).

109. Community mobilization: improving reproductive health outcomes. New York: EngenderHealth/The Acquire Project; 2006 (http://www.who.int/management/community/overall/CommunityMobilization2pgs.pdf, accessed 8 July 2016).

110. Gregson S, Nyamukapa C, Schumacher C et al. Evidence for a contribution of the community response to HIV decline in eastern Zimbabwe? AIDS Care. 2013;25(Suppl 1):S88–S96. doi:10.1080/09540121.2012.748171.

111. Quigley MA, Kamali A, Kinsman J et al. The impact of attending a behavioural intervention on HIV incidence in Masaka, Uganda. AIDS. 2004 Oct 21;18(15):2055–63.

112. Community innovation: achieving an end to gender-based violence through the HIV response. Athena Network, The Global Coalition on Women and AIDS; 2014 (http://www.athenanetwork.org/assets/files/Community%20Innovation/CommunityInnovationHIVGBV.pdf, accessed 8 July 2016).

113. Rodriguez-García et al. Investing in communities achieves results: findings from an evaluation of community responses to HIV and AIDS. Directions in development series. Washington (DC): World Bank; 2013.

114. Kyegombe N, Abramsky T, Devries KM et al. The impact of SASA!, a community mobilization intervention, on reported HIV-related risk behaviours and relationship dynamics in Kampala, Uganda. Journal of the International AIDS Society. 2014;17(1):19232. doi:10.7448/IAS.17.1.19232.

115. Bertrand JT, O'Reilly K, Denison J, Anhang R, Sweat M. Systematic review of the effectiveness of mass communication programs to change HIV/AIDS-related behaviors in developing countries. Health Educ Res. 2006 Aug;21(4):567–97.

116. Vidanapathirana J, Abramson MJ, Forbes A, Fairley C. Mass media interventions for promoting HIV testing: Cochrane Systematic Review. Int J Epidemiol. 2006 Apr;35(2):233–4.

117. U-report metrics. Lusaka (Zambia): Zambia National AIDS Council; 2016 (http://www.zambiaureport.org/web/metrics/, accessed 8 July 2016).

118. Searching without the Internet. Lusaka (Zambia): UNICEF Zambia; 2014 (http://www.unicefstories.org/2014/03/26/searching-without-the-internet-part-4-of-4-innovation-in-zambia/, accessed 8 July 2016).

119. Baird S, Chirwa E, McIntosh C, Ozler B. The short-term impacts of a schooling conditional cash transfer programme on the sexual behaviour of young women. Health Econ. 2010;19 Suppl: 55–68.

120. De Walque D, Dow W, Nathan R, Abdul R, Abilahi F, Gong E et al. Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania. BMJ Open. 2012;2:e000747 doi:10.1136/bmjopen-2011-000747.

121. Björkman Nyqvist M, Corno L, de Walque D, Svensson J. Using lotteries to incentivize safer sexual behavior. Evidence from a randomized controlled trial on HIV prevention. World Bank Policy Research Working Paper 7215. March 2015 (https://openknowledge.worldbank.org/bitstream/handle/10986/21654/WPS7215.pdf?sequence=1, accessed 8 July 2016).

122. Pettifor A. Unpacking the results of HPTN 068: a randomized controlled cash transfer trial to prevent HIV infection in young women in South Africa. Presentation (http://strive.lshtm.ac.uk/sites/strive.lshtm.ac.uk/files/HIV%20prevention%20for%20young%20South%20African%20women%20Lessons%20from%20Swa%20Koteka.pdf, accessed 8 July 2016).

123. Karim QA. Unpacking the results of HPTN 068: a randomized controlled cash transfer trial to prevent HIV infection in young women in South Africa. Presentation. CAPRISA 007 matched-pair cluster randomized controlled trial (http://pag.ias2015.org/PAGMaterial/PPT/2237.../CAPRISA%20007%20slides%20v1.pptx, accessed 8 July 2016).

124. Cluver L, Boyes M, Orkin M, Pantelic M, Molwena T, Sherr L. Child-focused state cash transfers and adolescent HIV-infection risks: a prospective multi-site study in South Africa. The Lancet: Global Health. 2013;1:E362–70.

125. Cluver L, Orkin M, Yakubovich A, Sherr L. Combination social protection for reducing HIV-risk behaviour amongst adolescents in South Africa. JAIDS. Forthcoming.

126. Cluver, L, Orkin, M, Boyes, Ma, Sherr, L. Cash plus care: social protection cumulatively mitigates HIV-risk behaviour among adolescents in South Africa. AIDS. 2014:S389–97.

127. Remme M, Vassall A, Lutz B, Luna J, Watts C. Financing structural interventions: going beyond HIV-only value for money assessments. AIDS. 2014 Jan 28;28(3):425–34. doi: 10.1097/QAD.0000000000000076.

128. De Neve JW, Fink G, Subramanian SV, Moyo S, Bor J. Length of secondary schooling and risk of HIV infection in Botswana: evidence from a natural experiment. Lancet Glob Health. 2015 Aug;3(8):e470–7. doi: 10.1016/S2214-109X(15)00087-X.

129. Education for All 2000–2015: achievements and challenges. Global Education for All monitoring report. UNESCO: Paris; 2015.

130. Zuurmond MA, Geary RS, Ross DA. The effectiveness of youth centers in increasing use of sexual and reproductive health services: a systematic review. Stud Fam Plann. 2012 Dec;43(4):239–54. doi: 10.1111/j.1728-4465.2012.00324.x.

131. Making health services adolescent friendly. Developing national quality standards for adolescent-friendly health services. Geneva: WHO; 2012 (http://apps.who.int/iris/bitstream/10665/75217/1/9789241503594_eng.pdf, accessed 8 July 2016)

132. Opportunity in crisis. Preventing HIV from early adolescence to young adulthood. New York: UNICEF; 2011 (http://www.unicef.org/publications/files/Opportunity_in_Crisis-Report_EN_052711.pdf, accessed 8 July 2016).

133. Ending child marriage. Progress and prospects. New York: UNICEF; 2013 (http://data.unicef.org/corecode/uploads/document6/uploaded_pdfs/corecode/Child-Marriage-Brochure-HR_164.pdf, accessed 8 July 2016).

134. Mining towns get R18bn facelift. In: South African Government News Agency [website]. 1 July 2015. Government Communication and Information System: c2015 (http://sanews.gov.za/south-africa/mining-towns-get-r18bn-facelift, accessed on 14 July 2015).

135. 135.Global Commission on HIV and the Law. Risks, rights and health. New York: Secretariat, Global Commission on HIV and the Law; 2012 (http://www.undp.org/content/dam/undp/library/HIV-AIDS/Governance%20of%20HIV%20Responses/Commissions%20report%20final-EN.pdf, accessed 8 July 2016).

136. Wagenaar AC, Tobler AL, Komro KA. Effects of alcohol tax and price policies on morbidity and mortality: a systematic review. American Journal of Public Health. 2010;100(11):2270–2278. doi:10.2105/AJPH.2009.186007.

137. Kennedy CE, Spaulding AB, Brickley DB et al. Linking sexual and reproductive health and HIV interventions: a systematic review. Journal of the International AIDS Society. 2010;13:26. doi:10.1186/1758-2652-13-26.

138. Hormonal contraception and HIV. Technical statement. Geneva: WHO; 2012 (http://www.who.int/reproductivehealth/topics/family_planning/hc_hiv/en/, accessed 8 July 2016).

139. 16 Ideas for addressing violence against women in the context of the HIV epidemic. Geneva: WHO; 2016 (http://apps.who.int/iris/bitstream/10665/95156/1/9789241506533_eng.pdf, accessed 8 July 2016).

140. Rottach E, Schuler SR and Hardee K. Gender perspectives improve reproductive health outcomes: new evidence. Washington (DC); Interagency Gender Working Group; 2009.

141. Preventing HIV among girls and young women. Implementation strategy, 2015–2019. Pretoria: SANAC; 2015 (http://sanacws.org.za/resources/preventing-hiv-among-girls-and-young-women, accessed on 9 September 2015).

142. Impact assessment of the expanded support programme, Zimbabwe. Harare: Health Partners International; 2011 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197475/ESP-Impact-Assessment-zimb-11.pdf, accessed 8 July 2016).

143. Elul B, Basinga P, Nuwagaba-Biribonwoha H et al. High levels of adherence and viral suppression in a nationally representative sample of HIV-infected adults on antiretroviral therapy for 6, 12 and 18 months in Rwanda. In: Khudyakov YE, editor. PLoS ONE. 2013;8(1):e53586. doi:10.1371/journal.pone.0053586.

144. Pronyk PM, Hargreaves JR, Kim JC, Morison LA, et al. Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. Lancet. 2006 Dec 2;368(9551):1973-83.

145. Remme, M, Vassall, A, Lutz, B et al. Development synergies and opportunities for co-financing of social protection. An HIV perspective. Presentation. (http://strive.lshtm.ac.uk/sites/strive.lshtm.ac.uk/files/Remme%20Development%20synergies%20and%20opportunities%20for%20co-financing%20of%20social%20protection.pdf , accessed 10 July 2016).

146. Heidi S, Naira K, Jantine J, Charlotte W. Is early sexual debut a risk factor for HIV infection among women in sub-Saharan Africa? a systematic review. American Journal Of Reproductive Immunology. 69 (Suppl. 1) 2013; 27:40. doi:10.1111/aji.12043'.

Copyright © 2016
Joint United Nations Programme on HIV/AIDS (UNAIDS)
All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of UNAIDS concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. UNAIDS does not warrant that the information published in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

UNAIDS/JC2868E

UNAIDS
Joint United Nations
Programme on HIV/AIDS

20 Avenue Appia
1211 Geneva 27
Switzerland

+41 22 791 3666

unaids.org