

# Preventing **HIV/AIDS** in young people

## Evidence from developing countries on what works

A summary of the WHO Technical Report Series No 938

**E**VERY DAY, 5 000 YOUNG PEOPLE aged 15–24 years become infected with HIV; almost 2 million new infections each year. Twenty-five years into the epidemic, far too little is still being done to prevent new infections in young people, who are at the centre of the epidemic. In sub-Saharan Africa, more than half of all new infections are among young people<sup>1</sup>, with girls being particularly affected, and globally, more than 10 million of the estimated 40 million people living with HIV are young people.

When national policy-makers, programme planners and donors decide how to allocate limited resources for AIDS prevention efforts, they need to have the evidence of what works and what doesn't. To respond to this need, the UNAIDS Inter-agency Task Team on HIV/AIDS and Young People supported a review of the effectiveness of prevention interventions among young people in developing countries. The results have been published in the WHO Technical Report Series (TRS) No. 938 entitled: *Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries*.

<sup>1</sup> UNAIDS Global AIDS report 2006



Using a standard methodology, authors reviewed the evidence from 80 studies of interventions delivered through the major settings which reach young people – schools, health services, mass media, geographically defined communities, as well as strategies to reach young people who are most at risk (e.g. young sex workers, drug users, and men who have sex with men). Other chapters provide an overview of the epidemiological data related to young people and HIV, effective and promising HIV prevention approaches in general, the innovative methodology used in the study, and overall conclusions and recommendations.

The report will provide guidance to decision-makers about how best to achieve the global goals on young people agreed during the 2001 UN General Assembly Special Session on HIV/AIDS (UNGASS), in particular: **by 2010, 95% of young people to have access to the information, skills and services that they need to decrease their vulnerability to HIV.** In addition, Paragraph 26 of the Political Declaration from the 2006 High Level Meeting on AIDS also explicitly states the need **to ensure an HIV-free future generation through the implementation of comprehensive, evidence-based prevention strategies** for young people.

### Methodology for reviewing the evidence

In order to assess the evidence for effectiveness in a transparent and standardized way, interventions in the different settings were reviewed using seven steps:

1. Define the key types of interventions that policy-makers need to choose between in the setting under consideration
2. Define the strength of evidence that would be needed to justify widespread implementation of the intervention
3. Develop explicit inclusion and exclusion criteria for identifying the studies to be included in the review
4. Critically review all eligible studies and their findings, by intervention type
5. Summarize the strength of the evidence on the effectiveness of each type of intervention

6. Compare the strength of the evidence provided by the studies against the threshold of evidence needed to recommend widespread implementation
7. From this comparison, derive evidence-based recommendations related to the implementation of each type of intervention in the setting or population group, and allocate to **Do not go, Steady, Ready, or GO!**

Interventions were classified into one of four categories depending on whether the evidence is strong enough to recommend:

- **GO!** Go to scale with the intervention, now, with monitoring of coverage and quality;
- **Ready:** Implement the intervention widely but evaluate it carefully
- **Steady:** Further research and development of the intervention is needed, though it shows promise of potential effectiveness
- **Do not go:** The evidence is against implementation of the intervention

### What the review has NOT done

While the report will make an important contribution, it has several limitations. The five key papers do not include all groups of young people (such as young migrant workers or soldiers) or all interventions (such as social marketing or traditional theatre). The report focused on mitigating vulnerability rather than preventing it, so did not include interventions directed to structural determinants such as education and poverty. It also did not include interventions directed to the political environment (e.g. political leadership and activism) because despite the importance of such intervention there is very little evidence available on their effectiveness.

The report focused on prevention and therefore did not include studies of interventions to provide treatment, care, or support for young people living with HIV and AIDS. There was much more detailed information available for some settings (e.g. schools) than others (e.g. interventions for young people most at risk), and many studies did

## Recommended interventions to prevent HIV among young people in developing countries

### ▶▶ **“GO”** – Implement on a Large Scale now (with monitoring of coverage and quality)

- **Schools:** curriculum-based interventions with effective characteristics<sup>2</sup>, led by adults
- **Health services:** interventions that include training for service providers, changes to the facilities, and promoting the services with young people and gatekeepers in communities
- **Mass media:** interventions that deliver messages through radio and/or television, plus other media

### ▶ **“READY”** – Implement widely (with a strong evaluation component to clarify impact of intervention and mechanisms of action)

- **Geographically defined communities:** interventions that target young people using existing structures and organizations
- **Young people most at risk of HIV:** facility-based programmes that also have an outreach component, and that provide information and services

not provide sufficient information about either the interventions or the evaluations. Few studies dealt adequately with costs and context, both of which have important implications for replicating successful interventions.

### Schools

In many respects, schools are uniquely well placed to contribute to decreasing HIV prevalence among young people. Of those young people who attend school, most enrol in school before they begin having sexual intercourse. Schools can provide fundamental information related to HIV prevention. However, sex education and HIV education interventions in schools vary widely.

*Intervention types:* There were 6 types of interventions categorized according to three different dimensions:

- curriculum-based versus non-curriculum based
- interventions with and without characteristics of effective curriculum-based interventions
- adult-led versus peer-led interventions

*Studies reviewed:* The review identified 22 studies in developing countries that used a reasonably strong experimental or quasi-experimental design, included at least 100 people, measured impact on one or more sexual behaviours, and was completed or published between 1990 and June 2005.

*Outcomes measured:* Knowledge, skills (personal values, perceptions of peer norms, communication about sex), sexual behaviour (sexual initiation, condom use, number of partners, use of contraceptives)

*Findings:* Sixteen of the 22 interventions significantly delayed sex, reduced the frequency of sex, decreased the number of sexual partners, increased the use of condoms or contraceptives, or reduced the incidence of unprotected sex. Of the 13 studies that had most of the characteristics of programmes in developed countries that had previously been deemed to be effective (“characteristics”), 11 significantly improved one or more reported sexual behaviours, and the remaining two showed improvements in reported

<sup>2</sup>Effective characteristics relate to features of curriculum development, content, teaching methods and implementation



sexual behaviour that were not statistically significant. Among these 13 studies, interventions led by both teachers and other adults had strong evidence of positive impact on reported behaviour. Of the 5 non-curriculum-based interventions, 2 of 4 adult-led and the 1 peer-led intervention improved one or more sexual behaviours.

*Recommendation:* The review concluded that curriculum-based interventions that incorporate most or all of the 17 characteristics and that are led by adults are **GO!** The other five types of interventions were classified as **Steady**.

### Health Services

Health services complement interventions in other sectors but are often not used by young people. The most significant services for the prevention of HIV in young people are those that strengthen the ability of young people to avoid infection, including information and counselling; reduce risks, notably, by providing condoms and harm reduction interventions; and provide diagnosis and treatment for STI and HIV.

*Intervention types:* There were 6 types of intervention defined based on whether they included some or all of the following characteristics:

- training for service providers/clinic staff
- making efforts to improve the quality of the facilities
- implementing community activities to generate demand and support for the services
- involving other sectors, notably schools and the media

*Studies reviewed:* Sixteen studies/reports were identified from developing countries which aimed to increase use of health services or related behaviours (condom use) and which had interpretable quantitative data. Of the 16 studies, 11 were multi-component interventions that involved other sectors, where the aim of increasing young people's use of services was usually one of a number of objectives.

*Outcome measured:* Increased utilization of health services

*Findings and recommendation:* The only intervention type where the evidence was sufficiently strong to receive a **GO!** recommendation was where there was a combination of training for service providers, making improvements to clinic facilities, and implementing activities in the community to increase service demand and/or community acceptability. Efforts which additionally involved other sectors (e.g. schools, mass media) were given a **Ready** recommendation. There was either weak or equivocal evidence for the other four intervention types, which were classified as **Steady** or **Do not go**.

### Mass Media

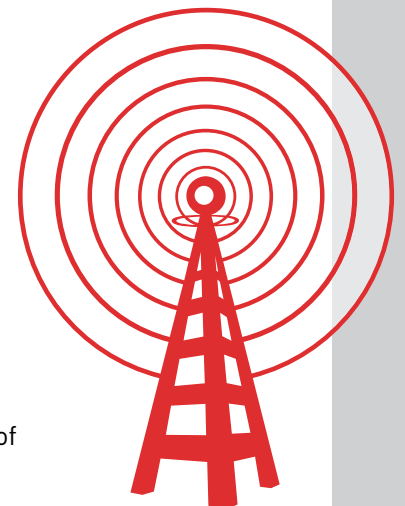
Young people are very attuned to mass media for information and cues on how to behave, hence the media has tremendous potential for reaching them with messages about HIV and AIDS.

*Intervention types:* There were 3 types of mass media interventions defined:

- radio only
- radio with supporting media
- radio and television with supporting media

*Studies reviewed:* The review included 15 studies that evaluated mass media interventions and were published or released between 1990 and 2004. Of these 11 were from Africa, 2 from Latin America, 1 from Asia, and 1 from multiple countries. One programme used radio only, 6 used radio with supporting media, and 8 others used television and radio with supporting media.

*Outcomes measured:* Knowledge, skills (self-efficacy in terms of abstinence or condom use), sexual behaviour (condom use, numbers of partners, abstinence), communication (parents, others), social norms, awareness and use of health services.



*Findings:* The data support the effectiveness of mass media interventions to increase knowledge of HIV transmission, improve self-efficacy in condom use, influence some social norms, increase the amount of interpersonal communication, increase condom use and boost awareness of health services. The review concluded that mass media programmes can and do influence HIV-related outcomes among young people, although not on every variable or in every campaign. Campaigns that include television require the highest threshold of evidence, yet they also yield the strongest evidence of effects.

*Recommendations:* The review concluded that comprehensive approaches – those involving radio and other media, as well as those involving radio, television and other media e.g. print – should receive a **GO!** recommendation. Only one radio only study met the inclusion criteria, and it showed mixed results. Hence, radio only programmes received a **Steady** recommendation.

### **Geographically Defined Communities**

Interventions delivered to young people in geographically-defined communities (for example, rural villages, urban settlements or neighbourhoods) have the possibility to reach young people where they live regardless of whether they are in school or out of school, married or unmarried, employed or not.

*Intervention types:* Four types of interventions were defined:

- interventions targeting youth and delivered through existing organizations or centres that served youth.
- interventions targeting youth but not affiliated with existing organizations or centres.
- interventions targeting all community members and delivered through traditional kinship networks.
- interventions targeting communities as a whole and delivered through community-wide events.

*Studies reviewed:* Evaluations of 22 interventions delivered in geographically-defined communities

were reviewed that had adequate descriptions of both the intervention and evaluation design and were published between 1990 and 2004.

*Outcomes measured:* Knowledge, skills (communication with peers, parents, partners, condom use), sexual behaviour (ever having sex, number of partners), social norms

*Findings and recommendations:* Although no intervention types were recommended as **Go!**, interventions that were directed explicitly to young people through existing community structures or organizations were considered to be **Ready**. All other community intervention types were classified as **Steady**, and there was a strong recommendation to invest more in high quality process and outcome evaluations and cost-benefit analyses, so that effective community-based interventions can be identified and promoted.

### **Young People Most at Risk**

Many young people are particularly at risk of becoming infected with HIV because of the situations in which they live, learn and earn; as a result of the behaviours they adopt, or are forced to adopt because of social, cultural or economic factors. This paper reviewed evaluations of interventions in developing countries targeting three groups most at risk of becoming infected with HIV: young sex workers, young injecting drug users and young men who have sex with men. Many of these young people live on the fringes of society, and are unlikely to be reached by interventions implemented through schools, health services or the media.

*Intervention types:* Four types of interventions were identified:

- information only through an outreach programme
- information and services through an outreach programme
- information and services through a facility-based programme
- information and services through a facility-based programme that included an outreach component



*Studies reviewed:* Only four studies were identified that met the inclusion criteria. The review was therefore augmented by studies of in developing countries that targeted these three population groups but that did not differentiate between young people and adults (since young people constitute a large proportion of populations most at risk of becoming infected with HIV in developing countries).

*Outcomes measured:* Increased access to information and services (harm reduction interventions, condoms and STI treatment)

*Findings and recommendations:* Little is known about the specific needs of young people (as opposed to older people) in these most at risk groups but it is important to ensure that their needs are met by programmes as there are data to indicate that they are particularly vulnerable.

However, when the evidence for young people in developing countries is combined with evidence for the general at-risk population some conclusions could be drawn. The review identified one type of intervention as being **Ready**: outreach and facility-based information and services. The other types (facility-based information and services, and information only through outreach) were classified as **Steady**. In all cases, programmes that are implemented should be carefully planned and monitored and have a strong evaluation component. Also, there is an urgent need to disaggregate data by age in order to determine how effective these programmes are in reaching young people and to better understand the specific needs of young people most at risk as opposed to older age groups.

## Recommendations

The report includes recommendations for policy-makers, programme development and delivery staff, and researchers, based on the **Steady-Ready-Go** findings.

### Recommendations for policy-makers

SETTING	RECOMMENDATIONS
General	<ul style="list-style-type: none"> <li>■ Young people are at the centre of the HIV pandemic and there are a range of interventions that have an adequate evidence base to recommend them to be widely implemented to achieve the global goals on HIV and young people as long as there is careful monitoring, evaluation and operations research</li> <li>■ Prevention can work</li> </ul>
Schools	<ul style="list-style-type: none"> <li>■ School-based interventions that incorporate characteristics previously shown to be related to effectiveness in developed countries and that are led by adults can reduce sexual risk behaviour and increase knowledge</li> </ul>
Health services	<ul style="list-style-type: none"> <li>■ Training health-care providers, making changes in facilities and undertaking activities to obtain community support can increase young people's use of health services that provide treatment for STIs, counselling, testing and condoms</li> <li>■ Access to health services will be enhanced by interventions in other sectors directed at young people's knowledge, skills, attitudes and behaviours</li> </ul>
Mass media	<ul style="list-style-type: none"> <li>■ Mass media programmes, particularly when coordinated with interventions in other sectors, can reach many young people with important prevention information on HIV/AIDS as well as help to reduce reported sexual risk behaviour</li> </ul>

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SETTING	RECOMMENDATIONS
Geographically defined communities	<ul style="list-style-type: none"> <li>■ Established community organizations serving young people can influence their knowledge, attitudes and reported sexual behaviours to help prevent the spread of HIV</li> </ul>
Young people most at risk	<ul style="list-style-type: none"> <li>■ Young people who are most at risk of HIV (in this review the groups considered were injecting drug users, sex workers, and men who have sex with men) require urgent action</li> <li>■ Greater attention to specifying the needs of young people in order to tailor interventions known to be effective to them is required</li> </ul>

### Recommendations for programme development and delivery staff

SETTING	RECOMMENDATIONS
General	<ul style="list-style-type: none"> <li>■ Interventions should be clear about what is being done and what the expected outcomes are</li> <li>■ Reports of interventions should provide results disaggregated by age and sex of the participants</li> <li>■ The implementation of all interventions should be accompanied by careful monitoring and by evaluation appropriate to the level of existing evidence</li> <li>■ Greater collaboration is needed between programme managers and researchers to facilitate effective monitoring and evaluation design</li> </ul>
Schools	<ul style="list-style-type: none"> <li>■ Programmes should be curriculum-based and designed and implemented using the characteristics shown to be associated with effectiveness</li> </ul>
Health services	<ul style="list-style-type: none"> <li>■ In order to increase young people's use of services it is necessary to train service providers and other clinic staff in how to provide high quality health services for young people</li> <li>■ Facilities should be made more accessible and acceptable to young people</li> <li>■ Work also needs to be done in the community to generate demand and support for the services for young people</li> <li>■ Other sectors, in particular schools and the media, can assist in creating demand by improving young people's overall knowledge about HIV/AIDS and encouraging health-seeking behaviours</li> </ul>
Mass media	<ul style="list-style-type: none"> <li>■ To achieve the best results, mass media programmes must be tailored specifically to young people</li> <li>■ They need to provide mutually reinforcing messages through multiple channels</li> </ul>
Geographically defined communities	<ul style="list-style-type: none"> <li>■ Initiatives should largely focus on working with existing youth-service organizations, where careful attention should be paid to selecting, training and specifying culturally appropriate interventions and tasks for programme staff</li> <li>■ Staff should benefit from ongoing supervision</li> <li>■ Organization leaders need to be vigilant in maintaining overall community support and resource mobilization</li> </ul>
Young people most at risk	<ul style="list-style-type: none"> <li>■ These young people should be provided with information, skills and services through facilities and through outreach strategies</li> <li>■ Careful evaluation of the impact and processes of interventions is essential to increase knowledge of what is effective among young people most at risk</li> </ul>



## Recommendations for researchers

SETTING	RECOMMENDATIONS
General	<ul style="list-style-type: none"><li>■ There is a critical need to strengthen research and programme monitoring and evaluation capacity in developing countries</li><li>■ High-quality evaluations and monitoring of the impact of HIV prevention interventions among young people in developing countries are urgently required for interventions classed as “Ready” and “Steady”</li><li>■ Operations research is needed to better understand the mechanisms of action of interventions in the “Go” and “Ready” categories</li><li>■ Clarity is needed about the specific vulnerabilities of young people, including young injecting drug users, young sex workers and young men who have sex with men, to guide programme managers</li><li>■ Standardization of outcome indicators would greatly facilitate comparisons of results across studies</li><li>■ Costing and cost-effectiveness studies should be built into evaluation studies</li><li>■ Research is needed to better understand the relationship between reported effects on behaviours and biological impacts</li></ul>
Schools	<ul style="list-style-type: none"><li>■ Whenever possible, future evaluations of school-based interventions should use randomized designs with sufficiently large samples</li><li>■ They should also measure the impact on STIs and HIV as well as knowledge and self-reported attitudes, self-efficacy and sexual risk behaviours</li></ul>
Health services	<ul style="list-style-type: none"><li>■ Evaluation and operations research should be core elements of any interventions to increase young people’s use of health services</li></ul>
Mass media	<ul style="list-style-type: none"><li>■ Evaluations of mass media programmes should focus on those that are comprehensive, have the potential for achieving population effects and use strong quasi-experimental designs to build a case for inferring causality</li></ul>
Geographically defined communities	<ul style="list-style-type: none"><li>■ Evaluation and operations research need to be core elements of programmes targeting young people and the community at large</li><li>■ This research should pay particular attention to identifying conditions for effectiveness among various populations (such as, young men and young women) and locations (such as rural or urban areas)</li></ul>
Young people most at risk	<ul style="list-style-type: none"><li>■ Research is needed to identify the special needs of young people most at risk in contrast to those of adults, in order to improve indicators that can be used for monitoring and evaluation</li></ul>

This is a summary of the key points from *Preventing HIV/AIDS in Young People: A Systematic Review of the Evidence from Developing Countries*, UNAIDS Inter-agency Task Team on Young People (World Health Organization: Geneva, 2006). The full report identifies the authors, includes references for each chapter and multiple tables and boxes summarizing findings from all of the studies reviewed. Copies of the report are available free online at: [http://www.who.int/child-adolescent-health/publications/ADH/ISBN\\_92\\_4\\_120938\\_0.htm](http://www.who.int/child-adolescent-health/publications/ADH/ISBN_92_4_120938_0.htm). Abstracts of the chapters of the report in Arabic, Chinese, French, Russian and Spanish are also available on this site.