Individual and group interventions for social and behaviour change

Key points

▪ Social and behavioural changes have been important contributors to the decreases in HIV incidence observed in some countries. Individual and group interventions for behaviour change have facilitated some of that change.

▪ Individual and group interventions for behaviour change can deliver intensive and focused information, motivation and skills for HIV risk avoidance. They can moderately increase condom use and reduce the incidence of STIs and HIV. Interventions that encourage actions (such as HIV testing) or that develop skills (such as condom use) are more likely to be effective, as are those that encourage development of positive attitudes towards condom use or skill-building.

▪ Individual and group interventions can be expensive to implement, and they are best suited for use with those at elevated risk of HIV. The duration of the interventions, coupled with the level of training needed to administer them, adds to the costs.

▪ Evidence of the long-term effectiveness of individual and group interventions is limited, with some indication that the effect may deteriorate with time. Continued supportive interventions may be needed to maintain the level of risk avoidance achieved in the shorter term.

▪ Focused individual and group interventions for priority locations and populations can play an important supporting role in combination prevention.

▪ Additional evaluation is needed to expand the evidence of short- and long-term effectiveness for these interventions.
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The role of interpersonal communication interventions in HIV prevention

This section will summarize the evidence on interventions involving communication with individuals or small groups (also commonly referred to as “interpersonal communication interventions”). In such interventions, communication is provided to an individual or a small group of up to 20 or 30 people, but also may reach much greater numbers if done simultaneously in different communities.

Although school-based programmes include interpersonal communication, this compendium discusses school-based interventions separately because they are provided in an institutional setting and require specific institutional conditions (see “HIV prevention education and comprehensive sexuality education”). Community-level interventions focusing on changing community structures or norms also are discussed separately. While this separation is made for the sake of presentation, the reality is that social and behavioural change interventions—including mass media and interpersonal-, community- and school-based programmes—often are implemented simultaneously.

In most cases, an individual’s risk of HIV exposure is directly related to his or her sexual behaviour. Specific actions, such as using a condom, can reduce an individual’s risk of acquiring HIV, as can other changes, such as reducing the number of sexual partners. In the early stages of the HIV epidemic, widespread changes in sexual behaviour were observed in settings such as Uganda, Zimbabwe and gay communities in the United States. Some studies have linked those changes to reductions in HIV incidence in those settings and among those populations (70, 71, 152). The cause of the changes that have been observed has been debated for years, but it appears that intentional persuasive social and behavioural change efforts played a key role (112, 153).

The earliest efforts in HIV prevention included a strong focus on behavioural interventions, as psychologists endeavoured to adapt models developed for cardiovascular disease prevention and smoking cessation to the more challenging topic of sexual behaviour change. As this section will show, the evidence on the effectiveness of that approach is mixed. Nevertheless, interpersonal communication interventions—which attempt to inform and change perceptions and social norms about behaviours and attempt to help people adopt new reduced risk behaviours—remain highly relevant to HIV prevention 40 years after the emergence of the epidemic.

While strong attention was paid to behavioural interventions between 1990 and 2010, the focus after 2011 on new biomedical prevention options has reduced the emphasis on interpersonal communication for behaviour change. This is due to modelling suggesting that a massive scale-up of HIV testing and treatment for those living with HIV could reverse the HIV epidemic. These models are based on the assumption that current rates of condom use will not fall and that sexual behaviours will remain constant (57). If condom use rates do decline and numbers of sexual partners do increase, however, the prevention effects of HIV treatment could be lower than assumed in the models. The incidence of other STIs also may increase. As a result, biomedical interventions alone are unlikely to change the underlying causes that make individuals and communities more vulnerable to HIV infection, although HIV treatment may contribute to reducing stigma associated with HIV.

In contrast, social change interventions intend to help communities tackle the causes of HIV and STI infection by challenging cultural norms and practices that stigmatize and disempower certain social groups and populations. Behaviour change interventions seek to improve the ability of individuals to put knowledge and skills into practice. There is therefore a clear
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Rationale for interventions that seek to help individuals make changes to their own behaviour while simultaneously encouraging changes in social norms around sexual behaviour. Both approaches are key elements of combination prevention, and they may include measures (also known as “structural approaches”) to change the social structures that influence vulnerability. Taken together, social and behaviour change programmes are therefore essential components of HIV prevention.

Behaviour change interventions may be challenging to implement on a broad scale in some settings. They can require multiple sessions conducted by trained individuals, which may lead to greater expense in contexts where costs for human resources are high and community volunteers are not available. This may limit the widespread use of such interventions, making them more appropriate for specific groups, such as those at highest risk.

The complexity of rigorous evaluation means that social change interventions—and some types of behaviour change interventions—are difficult to evaluate. In randomized controlled trials, for example, the distinction between people exposed and not exposed to specific interventions is less clear due to variable intensities of exposure and the presence of a range of other national or local prevention interventions. Also, many interpersonal communication interventions seek to achieve a change in social norms, which by definition is not restricted to the individuals or community exposed to a particular intervention. Other, less conclusive evidence, however, has suggested that some forms of social and behaviour change intervention have had a positive impact on reducing sexual risk behaviours and the use of non-sterile injecting equipment.

Almost all biomedical interventions have a behavioural component. Individuals have to seek out or decide to accept the offer of services such as HIV testing, PrEP and VMMC. They then must follow certain guidelines associated with the services: for example, men who seek out circumcision services must remain sexually abstinent for six weeks after the procedure, and people taking antiretroviral medications need to maintain good adherence. As a result, the need for interventions to address behaviour has not been obviated; it has, in fact, been expanded.

Identifying the most effective interventions to provide in a particular setting for a given population is a key challenge. The social, political and economic context is crucial, and a programme that is appropriate and effective in one setting may not necessarily be so in different circumstances. This section reviews the latest evidence for some of the most important intervention styles: intensive individual and group interventions, community-wide interventions and behaviour change communication.

**Intensive individual and group interventions**

- Intensive interpersonal communication interventions were found to have an effect on self-reported condom use.
- Effects on condom use were stronger when sociocultural barriers were addressed.
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- Intensive interpersonal communication interventions also were reported to have an effect on STIs and HIV in specific contexts, particularly when an STI or HIV diagnosis was made when an individual entered the study.
- Active interventions requiring participation and practice were more effective than passive interventions.
- Programmes with attitudinal elements, behavioural skills and condom provision were all associated with significant increases in condom use.

A counsellor or health professional usually delivers intensive behavioural interventions to individuals or small groups, either in an individualized session or in multiple sessions held over a number of weeks or months. The sessions may be designed to help individuals do some or all of the following:

- Gain knowledge about HIV and its transmission.
- Perceive whether they may be at risk of acquiring HIV.
- Increase their motivation to reduce risk.
- Expand control over involvement in high-risk behaviour.
- Improve confidence to discuss sex and sexual health openly.

Many interventions are designed to address more than one of these goals. These interpersonal communication interventions have an advantage over less intensive mass media interventions because their duration encourages identification of personally relevant issues, reflection on these factors and support in finding acceptable solutions. However, to be effective, interpersonal communication might also need to be combined with community-wide interventions to engage with the wider context in which participants live.

**Evidence of effectiveness**

Several meta-analyses and systematic reviews have assessed the evidence for the effectiveness of behavioural interventions. A meta-analysis identified 42 studies of 67 interventions that used a randomized controlled or quasi-experimental design to assess condom use, STI incidence or HIV incidence (154). Most of the studies (62%) were conducted in North America, with 17% in Asia, 14% in Africa, 5% in Europe and 2% in South America.

Around half the interventions were provided to groups—usually of approximately 10 participants—that met on a median of four occasions for two hours at a time. The remaining interventions were for individuals, and they typically involved one meeting of around 40 minutes. The range of interventions provided was diverse and included facilitated group discussions, HIV counselling and testing, skills training for negotiating safer sex or condom use, and information provision. The authors did not report on the use of behaviour change theory in the interventions (154).

Pooling results, the interventions significantly increased condom use by 17%, reduced STI incidence by 16% and reduced HIV infection by 48% (although this was only assessed in 13 interventions) (154). Effects on condom use were associated with interventions addressing sociocultural barriers, while effects on STIs were associated with patients being diagnosed...
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with HIV or an STI at study entry. The final assessment of behaviour change took place an average of one year after the completion of the intervention. The analysis did not distinguish between the effectiveness of individual or group behavioural interventions.

Interventions that addressed sociocultural barriers (such as poverty or gender norms) had a greater impact on condom use than those that did not ($\beta = 0.32; P = 0.02$) ($154$). The impact was also greater for individuals who had HIV or an STI at the beginning of the intervention: these participants were less likely to have a subsequent STI during the study ($\beta = 0.32, P = 0.04$). Contrary to the expectations of the authors of the meta-analysis, interventions that did not include self-management skills training were more likely to have an impact on the incidence of STIs.

Also contrary to widely held assumptions, the meta-analysis did not find that changes in self-reported condom use resulted in changes in biological outcomes. In other words, while numerous studies reported increases in condom use and a few reported decreases in HIV or STIs, there was no clear link between the two, and changes did not necessarily occur in the same people. Expressed more precisely, there was no association between condom use and the incidence of STIs and HIV ($P \geq 0.10$), and regression analyses did not find that condom use predicted changes in HIV incidence ($154$). This finding may raise significant questions about the way these interventions work: interventions are intended to help individuals make behavioural changes, which should subsequently lower their risk of HIV infection.

It is important to note, however, that accurate measurement of condom use—the basis of this finding—has long been fraught with difficulties. A systematic review of condom measurement identified large variations in how condom use is assessed, raising the possibility that the method used to assess intervention effectiveness may have contributed to the above finding ($155$).

**Characteristics of effective interventions**

A meta-analysis of HIV prevention interventions conducted between 1985 and 2003 provided insight into the characteristics of effective interventions ($156$). This meta-analysis included 354 studies, which is a very large number for a meta-analysis, but it is the result of the analysis having broad inclusion criteria and accepting studies with weak evaluation designs (e.g., those with no control groups). In addition, although 33 countries were represented, three quarters of the studies were conducted in the United States, raising questions about the utility of those findings in other settings.

Around half of the studies in the meta-analysis were so-called active interventions, which required participants to practise a skill (e.g., role play negotiating safer sex or putting on a condom) or some other kind of health-seeking behaviour (such as taking an HIV test). In other programmes—so-called passive programmes—participants merely received information (such as reading information or watching a video).

Overall, active programmes had a greater impact on condom use than passive programmes. The effects observed were strongest for interventions that took place in clinical settings ($156$).

Programmes with attitudinal elements (designed to induce a positive attitude about using condoms), behavioural skills (containing verbal training or arguments designed to improve condom-using behaviours among participants) and condom provision were all associated with significant increases in condom use. In contrast, programmes with normative arguments (designed to increase social responsibility or increase perceived peer group or societal
pressure to use condoms) were associated with decreases in condom use, except among young people under the age of 21. Similarly, interventions that presented HIV as a threat or played on fears (designed to increase awareness of the negative consequences of infection) resulted in less condom use, especially among men (156). The review did not report on the relationship between the intensity or duration of the intervention and subsequent behaviour change.
Evidence for individual interventions in resource-limited settings

What does the evidence say about the effect of individual interventions in resource-limited settings?

- Individual interventions—including counselling, group education and HTC for HIV-negative partners in serodiscordant couples—had positive effects on reported condom use, partner reduction and disclosure of HIV status.
- Individual counselling interventions were partially effective in increasing reported condom use.

A systematic review identified 10 behavioural interventions in developing countries that focused on serodiscordant couples or people living with HIV (85). The interventions included counselling (both for the person diagnosed with HIV and his or her partner), group education and HIV testing.

The greatest benefit of the interventions was seen in terms of condom use, with additional effects observed in relation to reduced numbers of sexual partners and increased disclosure of HIV status. Interventions for couples appeared to be most promising, with one group intervention for women living with HIV in Zambia finding that the inclusion of women’s partners in the groups led to improved behavioural outcomes, increasing reported condom use among women after the intensive intervention (157).

A further systematic review of behavioural HIV prevention interventions in low- and middle-income countries identified four randomized controlled trials of individual counselling interventions (158). The authors identified 19 studies that met their inclusion criteria, a third of which were conducted in South Africa. Eight of the studies reported effectiveness in increasing condom use, while interventions to reduce partner numbers were not found to be effective. Those that addressed alcohol use and partner violence had mixed results.

In one South African study, repeat attendees at an STI clinic were randomized to either receive a 20-minute didactic educational session on HIV or a one-hour information–motivation–behavioural (IMB) skills intervention for health behaviour change (159). According to the IMB model, information related to HIV transmission and prevention is a prerequisite to risk reduction. Motivation to change is required to use HIV prevention information actively to reduce risk. Behavioural skills for HIV prevention are a final element that—together with information and motivation for change—contribute to behaviour change. As part of the IMB intervention, the counsellor-facilitated behavioural self-management and sexual communication skills-building exercise explored triggers for unsafe behaviour and provided exercises on communication skills.

Counselling also could be adapted to address the use of alcohol in sexual contexts, a significant factor in the South African epidemic (160). There were no differences in partner numbers at the three-month and six-month follow-ups, but there were significantly fewer occasions of unprotected sex (based on self-report). Reductions in drinking at the time of sex also were observed at the three-month follow-up, but not at the six-month follow-up, leading the authors to suggest that risk reduction behaviour changes also may not be durable and that additional structural interventions to reduce drinking in sexual contexts may be needed.
One of the other interventions included in the review was developed in the United States (161) and adapted for use in South Africa (162). Called The Options Project, this intervention aims to support people living with HIV to adopt and sustain safer sex practices. Based on the IMB skills model and motivational interviewing techniques, it was a small randomized trial of 152 people. Half of the participants received the intervention and saw a counsellor trained in this approach; the remainder (the control group) continued to receive adherence support from lay counsellors.

Among HIV-positive study participants who received the intervention, the mean number of unprotected vaginal and anal sex events decreased significantly over time (2.64 to 0.40; \(P = 0.016\)), while there was a marginally significant increase in those events (from 2.26 to 3.85; \(P < 0.05\)) among individuals in the standard-of-care control condition (162). The observed reduction in high-risk behaviour occurred despite the fact that participants increased their overall sexual activity over the course of the study (probably due to starting antiretroviral therapy and their subsequent improved health). However, as the study relied on self-reported behaviour and the control group did not have an intervention focused on sexual behaviour, individuals in the intervention arm may have felt a greater need to report safer behaviour at follow-up.

Changes observed after intensive interventions might not be durable. During a six-month trial of the spermicide nonoxynol-9 in Cameroon, two thirds of participants reported consistent condom use (163). Fourteen months after the trial and its associated counselling ended, however, participants were interviewed again, and only one third reported consistent condom use.
Small group interventions in resource-limited settings

What does the evidence say about the effect of small group interventions in resource-limited settings?

- Small group interventions can have temporary effects on condom use and partner numbers.
- The Stepping Stones intervention reduced HSV infection and some risk behaviours, including transactional sex, intimate partner violence and problem drinking among men.

The 2013 systematic review of behavioural interventions in low- and middle-income countries referenced above identified four randomized controlled trials of small group interventions, three of which were based on the IMB skills model (158). In these studies, group interventions lasted up to five hours; members of control groups received didactic educational sessions.

The interventions were delivered to varied groups: military personnel in Angola (164), long-distance truck drivers in India (165) and township community members in South Africa (160). The two interventions in Africa had an impact on self-reported condom use, but only at three-month follow-ups, with the effect dissipating by six months. Similarly, changes in partner numbers either did not occur (in Angola) or did not endure (in South Africa) (160, 164). The intervention in India also produced mixed results, with some evidence of increased condom use among both marital and nonmarital partners reported at 10-month follow-ups for participants in the IMB skills model intervention (165). None of these trials included biological outcomes.

The fourth randomized controlled trial included in the systematic review was an evaluation of Stepping Stones, a programme originally developed in Uganda, that has been used in more than 40 countries, adapted for 17 settings and translated into 13 languages (166). In this regard, the programme differs from the other intervention programmes that have not been established with wide coverage and that have not been widely used prior to their evaluation. The Stepping Stones programme aims to improve sexual health by fostering more gender-equitable relationships and communication between sexual partners.

Topics in the Stepping Stones curriculum include the following:

- How we act and what shapes our actions.
- Sex and love.
- Conception and contraception.
- Taking risks and sexual problems.
- Unwanted pregnancy.
- STIs and HIV.
- Safer sex and condoms.
- Gender-based violence.
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- Motivations for sexual behaviour.
- Dealing with grief and loss.
- Communication skills.

The cluster randomized controlled trial, which took place in South Africa, assessed biological outcomes. Young people aged 15 to 26 years either received a three-hour session on HIV and safer sex (the control group) or a 50-hour programme that used participatory learning approaches to develop knowledge, risk awareness, critical reflection and communication skills. Over two years of follow-up, the programme reduced the incidence of HSV-2 (adjusted incidence rate ratio [IRR] = 0.67; 95% CI: 0.47–0.97). It also reduced some risk behaviours in men (intimate partner violence, transactional sex and problem drinking). However, there was no evidence of any of the desired behaviour changes in women; moreover, the intervention had no impact on the incidence of HIV in either men or women (adjusted IRR = 0.95; 95% CI: 0.67–1.35) (166).
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**Operational considerations**

Data on the applicability and appropriateness of intensive interventions for individuals in higher prevalence settings are limited. The available studies have relied on self-reported behaviour during short periods of follow-up, and they do not provide biological outcomes.

Intensive interventions can be relatively expensive to provide, and they should be prioritized for individuals who are at the greatest risk of acquiring or transmitting HIV. This may mean not just focusing interventions on key populations, but prioritizing individuals within those populations who have particular behaviours. For example, rather than simply focusing on gay men and other men who have sex with men, interventions that reach men who have unprotected sex with multiple partners are likely to have a greater benefit and merit the extra effort and expense. Similarly, individuals may move in and out of periods of higher-risk behaviour as their circumstances and relationships change, so interventions that recognize the changing profile of HIV risk behaviours and adapt accordingly will have a greater HIV prevention impact.

Intensive interventions should not be offered in isolation. Their impact may be greater if there are synergies with other, ongoing programmes (such as condom promotion and regular screening for STIs). The latter may help identify individuals in greatest need of support and provide a referral pathway.

Similarly, there are medical services that are already in contact with many individuals living with HIV. These existing relationships provide opportunities to identify individuals who could benefit from HIV prevention interventions. Clinical providers can conduct regular risk assessments as part of the standard of care and either refer individuals to more specialized services or provide brief information and counselling themselves. While providers do have competing priorities, a short intervention (3–5 minutes) can have an impact on specific outcomes for particular populations. Brief training for health-care providers can support them to provide the right type of information, counselling, services and referrals, while enhancing their motivation, skills and comfort when discussing prevention topics (167).

While most of the studies described thus far have focused on condom use and partner numbers, these kinds of interventions can be used to address a wide range of health behaviours, such as drug use and the use of non-sterile injecting equipment. Moreover, behavioural interventions could be used to support biomedical prevention approaches: for example, they could address sexual abstinence following VMMC and adherence to antiretroviral therapy, or they could reinforce condom use among people taking PrEP.

However, the limitations of this style of intervention must be acknowledged. Evaluated interventions may report reductions in the prevalence of risk behaviours of up to 50% in intervention groups, but that rarely lasts longer than a year after completion of the intervention. Most importantly, the evidence for reduced HIV incidence following these interventions is slight, with clear indications that initial benefits are not sustained over the long term.

There is no evidence to show how these interventions could produce region-wide or countrywide reductions in HIV incidence or prevalence. In fact, there are only a few examples where such intensive programmes ever reached more than a fraction of those who need them due to the cost to health-care providers functioning within already over-stretched health systems.
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One such example in Zimbabwe used a community-based delivery modality to achieve relatively high coverage (168). Using different programme elements, Zimbabwe’s national community-based prevention behaviour change programme reached more than 70% of the intended population nationwide (people aged 18 to 44 years) between 2007 and 2012. More than 20 million person exposures were recorded, and more than 700 000 people completed the seven sessions of the Love & Respect community course.

Over the programme period, coverage of HTS increased, as did reported condom use with nonregular partners among young women who had been exposed to the programme (168). HIV prevalence declined over the programme period, but the reduction could not be linked to exposure to the programme. The programme’s high coverage was aided by a business-style approach of contracting local nongovernmental organizations, who became responsible for district and community outreach targets that were to be achieved through community facilitators.
Other issues to be considered

Intensive interpersonal communication programmes require that participants have identified their HIV prevention needs and see them as a priority in order to commit to attending multisession interventions. In fact, efforts to change behaviour are only likely to be successful if they resonate with the intended audience and address its specific needs and values, but we have a limited understanding of the acceptability and cultural relevance of these approaches in diverse settings. It is possible, even likely, that many of those in greatest need of intensive interventions are some of the least likely to engage with them. At the same time, scale-up and broad coverage of affected populations is unlikely to be affordable or feasible in several epidemic settings, suggesting concentrated interventions for those at highest risk.

Most studies using randomized or quasi-experimental design to assess behavioural interventions were conducted in North America, and few rigorous assessments are available for interventions conducted in low- and middle-income countries. Just as importantly, translation of evidence-informed interventions from research to practice can be challenging: interventions often need to be adapted to local circumstances while maintaining fidelity to their core elements (169).

Existing models of behavioural interventions are based on various cognitive behavioural theories that assume individuals will take steps to avoid risks if they are fully informed and sufficiently motivated. While such so-called rational actor approaches may work well for many people, they are unlikely to address the needs of all of the populations at risk of infection. Because sexuality and drug use are not always subject to cognitive control or mediation, cognitive approaches alone will not produce behaviour change in many people. Many individuals face an exceptionally elevated risk of infection not primarily because of their own behaviour, but as a result of their partner’s behaviour or because of the epidemiological context in which they (perhaps unknowingly) live and function. Influencing individual behaviour in such cases will have only a limited impact on infection rates (170).

Current behaviour change theories are essentially individualistic, although HIV is predominantly transmitted within the context of sexual relationships. There is a need for the development of theory and interventions that treat couples or relationships as the unit of change and analysis. Rather than emphasizing personal beliefs and self-efficacy, alternative theories might focus on interpersonal dynamics that contribute to sexual risk behaviour, including power imbalances, communication styles and relationship quality (171).
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Population considerations

Much of the evidence for intensive individual and group interventions has been generated through work with key populations in the United States, including people living with HIV, African Americans and gay men and other men who have sex with men.

People living with HIV

A systematic review of interventions for people living with HIV in the United States identified 48 studies (167). Of those identified, 14 were judged to be high-quality studies, and 11 of those showed a significant positive impact on HIV risk behaviour.

The style of intervention in the studies ranged from brief prevention messages delivered during regular clinic appointments to intensive multisession interventions over several weeks or months. Effective interventions typically addressed behaviour change motivation, HIV misconceptions, treatment adherence, mental health and HIV transmission risk behaviour. A meta-analysis of 15 randomized controlled trials of intensive individual sexual risk reduction interventions for people living with HIV conducted in the United States between 1993 and 2004 found a significant increase in condom use overall, but no effect on partner numbers (172). Interventions had a greater effect on condom use when they focused on young people and populations other than gay men and other men who have sex with men, and when they included both motivational and behavioural skill components. Interventions that did not include both components showed no effect.

Another systematic review and meta-analysis of five randomized studies of individual and group interventions to promote condom use in women living with HIV found that there was no overall increase in condom use at two, six and 12 months after the intervention (173). The authors concluded that condom promotion for women living with HIV needed to be integrated with family planning services and the provision of antiretroviral therapy and broader health services (e.g., mental health). In the context of treatment as prevention, condoms remained an important barrier method because detectable HIV viral load and suboptimal treatment adherence represented a common challenge towards preventing HIV transmission.

Heterosexual men and women

A meta-analysis of individual and group interventions for heterosexual African Americans identified an impact on self-reported behaviours, but not on biological outcomes (174). Programmes that tailored their content to ensure that it was culturally relevant to the audience tended to be more successful than those that did not. Greater effectiveness was also found for interventions that used peer educators and aimed to influence social norms about safer sex. Programmes that provided skills training on the correct use of condoms and training in the communication skills needed for negotiating safer sex also tended to be more effective, as were programmes that had sessions over multiple days, each lasting several hours.

Gay men and other men who have sex with men

A meta-analysis identified six individual and 15 group interventions that focused on gay men and other men who have sex with men (175). Overall, the interventions reduced the odds of participants reporting unprotected anal intercourse for up to one year of follow-up by 43% for individual interventions and 27% for group interventions.
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Group interventions with greater effectiveness included multiple intervention sessions, sessions delivered by other gay men and other men who have sex with men, and those that included skill-building exercises through role playing, live demonstrations or practice. Two economic evaluations estimated that two group interventions were cost-saving; the estimated averted HIV medical care costs exceeded the programme intervention costs (175). However, not enough studies included data on biological outcomes for these to be included in the meta-analysis.

A different review of interventions for gay men and other men who have sex with men had less encouraging results. It found that individual interventions reduced unprotected anal intercourse by around 7%, while group interventions reduced it by 29% (176). However, the studies of individual interventions suggested that they have no long-term impact on HIV incidence. There were no data on group interventions and HIV incidence. The authors concluded that “stand-alone behavioural interventions are not sufficient to reduce HIV transmission in [gay men and other men who have sex with men].”

Data from Project EXPLORE, one of the only studies to use HIV incidence as an outcome, show both the potential and the limitations of intensive behavioural interventions for individuals (30). To assess the effectiveness of this intervention for gay men and other men who have sex with men, nearly 4300 Americans were randomized to one of two conditions: either to receive 10 sessions of intensive, individualized counselling, followed by maintenance sessions every three months (the intervention group), or to receive counselling every six months based on the Project RESPECT model (the control group) (27).

The EXPLORE intervention integrated the approaches of motivational interviewing, the IMB skills model (including training in communication skills) and social learning theory (the normative component of behaviour change). Counsellors and clients assessed circumstances and occasions in which an individual might engage in high-risk behaviour; they then established risk reduction plans (30).

Over four years of follow-up, modest but statistically significant reductions in unprotected anal intercourse were found (OR = 0.86; 95% CI: 0.79–0.94) in the intervention group (30). Similar reductions were found in unprotected anal intercourse with partners of different HIV status. After one year of follow-up, HIV incidence was 39% lower, but this was not sustained. At the end of the four-year trial, HIV incidence was 18% lower, but the change was not statistically significant (OR = 0.82; 95% CI: 0.64–1.05).

Some of the limited impact of the intervention may be due to the fact that while it was effective in modifying some factors (such as communication skills and self-efficacy), it did not affect factors such a drug and alcohol use or depression. Each of these unaddressed risk factors was associated with seroconversion among study participants (30).

The results showed that a complex, theory-based intervention that requires many hours of one-to-one contact time did change behaviour, but that its effect was modest and declined over time. A few years after delivery, the intervention had no discernible impact on HIV infections. This may well be true of other studies that report initially positive results but that have much shorter follow-up periods. These studies are more likely to report positive results and not be able to measure the decay in effect over time.
Sex workers

Systematic reviews have concluded that risk reduction counselling combined with condom promotion has a beneficial impact on behaviour for sex workers in low- and middle-income countries (178, 179). Perhaps the most encouraging evidence comes from a programme for female sex workers in Mexico that randomized more than 900 participants to two styles of counselling, each delivered during a single 30-minute session (180). In the intervention group, the counselling was based on social cognitive theory and motivational interviewing: it covered motivations for practising safer sex, barriers to condom use, techniques for negotiating safer sex with clients and social support. In the control group, the counselling was more didactic, focusing on information delivery and personal risk assessment.

At the six-month follow-up, women in the intervention group reported greater increases in condom use than did the women in the control condition (180). Moreover, incidence of chlamydia, gonorrhoea, syphilis or HIV was 40% lower in the intervention group (20 cumulative infections versus 38 in the control) (RR = 0.60; 95% CI: 0.36–1.00). Due to small study size leading to low statistical power, no statistically significant differences between individuals in the intervention and control groups were found for individual STIs. The authors noted that a more passive intervention in the control group would likely result in a greater contrast between the intervention and control groups, and that it would likely have generated greater effect sizes.
Conclusion: individual and group interventions

Individual and group interventions have long been used in HIV prevention. Based on models and experience drawn from other areas of psychology—such as smoking cessation and heart disease prevention—these interventions are typically led by a trained professional and include more than one session, sometimes using many sessions. As a result, the opportunity to personalize strategies for risk avoidance to meet the needs and circumstances of an individual is greater than for other prevention interventions. That scope and customizable approach also contributes to the costs of these interventions, making their use more practical for those at elevated risk of HIV, allowing for a focus on the specific factors influencing HIV transmission within the respective priority population.

Evidence suggests that these interventions can be effective in bringing about behaviour change in some people, but that the changes may not persist over time. Just like other HIV prevention interventions—with the exception of VMMC—individual and group interventions require continued programming and ongoing reinforcement. Coupling these interventions with other elements of HIV prevention that are commonly included in combination prevention may enhance and extend their effect over time.
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