



## FEATURES

# The Contribution of Sexual and Reproductive Health Services to the Fight against HIV/AIDS: A Review

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**Abstract:** *Approximately 80% of HIV cases are transmitted sexually and a further 10% perinatally or during breastfeeding. Hence, the health sector has looked to sexual and reproductive health programmes for leadership and guidance in providing information and counselling to prevent these forms of transmission, and more recently to undertake some aspects of treatment. This paper reviews and assesses the contributions made to date by sexual and reproductive health services to HIV/AIDS prevention and treatment, mainly by services for family planning, sexually transmitted infections and antenatal and delivery care. It also describes other sexual and reproductive health problems experienced by HIV-positive women, such as the need for abortion services, infertility services and cervical cancer screening and treatment. This paper shows that sexual and reproductive health programmes can make an important contribution to HIV prevention and treatment, and that STI control is important both for sexual and reproductive health and HIV/AIDS control. It concludes that more integrated programmes of sexual and reproductive health care and STI/HIV/AIDS control should be developed which jointly offer certain services, expand outreach to new population groups, and create well-functioning referral links to optimize the outreach and impact of what are to date essentially vertical programmes.* © 2003 Reproductive Health Matters. All rights reserved.

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**T**HE HIV/AIDS pandemic has had profound effects on societies, individuals and families, as well as on health programmes. As noted by de Zoysa:<sup>1</sup>

*“At the societal level, AIDS is changing views about sexuality, sexual behaviour and procreation, and intensifying concerns about human rights. At the level of the individual and the family, AIDS is complicating sexual relationships and threatening the ability to safely conceive and bear children. For those engaged in service delivery, AIDS is changing priorities, increasing the need to address the other sexually transmitted infections, influencing recommendations on contraceptives, and frustrating abilities to counsel*

*clients seeking advice on issues as far-ranging as infant feeding and partner relations.”*

With the HIV/AIDS pandemic showing few signs of abating in the near future, especially in developing countries, governments and international organizations have been planning multi-sectoral approaches for prevention of HIV transmission, and treatment and care for those living with HIV and AIDS. Most commonly, it has been the health sector that has taken a lead in these efforts, including seeking ways of making antiretroviral therapy accessible. In many countries, and within most of the international donor and technical assistance organizations, bodies that focus explicitly on coordinating HIV/AIDS activities have

been established. Given that approximately 80% of HIV cases globally are transmitted sexually and a further 10% perinatally or during breastfeeding, the health sector has looked to sexual and reproductive health (SRH) programmes for leadership and guidance in preventing transmission, and more recently in offering some aspects of treatment and care.

This paper reviews the existing contributions of SRH programmes to HIV/AIDS prevention and treatment—what efforts have been made and how feasible, acceptable and effective they have been. It is not intended to be an exhaustive review but to illustrate the major types of contributions made, mainly by maternal and child health (MCH), family planning (FP) and sexually transmitted infection (STI) services, and the positive implications for SRH policies and programmes of including attention to HIV/AIDS in their operations.

## Background

In 1994, the International Conference on Population and Development (ICPD) adopted a plan of action for achieving sexual and reproductive health. Strategies to achieve this goal by 2015 are guided by the following short list of goals and indicators, which were agreed upon by the United Nations General Assembly's Special Session (UNGASS) on ICPD + 5 in 1999:<sup>2</sup>

- All primary health care and family planning facilities should offer the widest achievable range of safe and effective family planning methods, essential obstetric care, prevention and management of reproductive tract infections, including sexually transmitted diseases and barrier methods to prevent infection.
- Where the maternal mortality rate is very high, at least 40% of all births should be assisted by skilled attendants; by 2010 this figure should be at least 50% and by 2015, at least 60%. All countries should continue their efforts so that globally, by 2005, 80% of all births should be assisted by skilled attendants, by 2010, 85%, and by 2015, 90%.
- Where there is a gap between contraceptive use and the proportion of individuals expressing a desire to space or limit their families, countries should attempt to close this gap by at least 50% by 2005.

- By 2010 at least 95%, of young men and women aged 15–24 have access to the information, education and services necessary to develop the life skills required to reduce their vulnerability to HIV infection. Services should include access to preventive methods such as female and male condoms, voluntary testing, counseling and follow-up. Governments should use, as a benchmark indicator, HIV infection rates in persons 15–24 years of age, with the goal of ensuring that by 2010 prevalence in this age group is reduced globally by 25%.

Achieving consensus on the concept of sexual and reproductive health was a major achievement of the ICPD; the major challenge subsequently has been putting this concept into practice. It is relatively straightforward to define the various health care services, including the communication of information, that can improve the conditions encapsulated within sexual and reproductive health. It has proved much harder, however, to develop feasible, acceptable, effective and cost-effective strategies for providing these services, particularly given the primary health care programmes in place in 1994. Moreover, in spite of many valiant efforts in this regard, throughout the decade since ICPD, a backdrop of health sector reforms, decreasing funds from both national and international sources for health care (including for sexual and reproductive health services), and the urgency to respond to AIDS, tuberculosis and malaria, has created numerous obstacles.

## Organisation of sexual and reproductive health services historically

How have SRH services been organised historically and what changes have occurred since ICPD? Which services are (or should be) included in any definition of SRH services? A recent unpublished strategy document from the World Health Organization (WHO) Reproductive Health and Research Department lists five key elements as essential for addressing sexual and reproductive health: ensuring contraceptive choice and safety, improving maternal and newborn health, reducing sexually transmitted and other reproductive tract infections (STIs/RTIs) and HIV/AIDS, eliminating unsafe abortion, and promoting healthy sexuality. Other priorities include

prevention and treatment of infertility, screening and treatment for reproductive tract cancers and treatment of menstrual disorders.

In the public sector, family planning services have been provided both through stand-alone programmes and MCH/FP programmes that include antenatal and delivery, child health and family planning services. Since ICPD, most of these programmes have renamed themselves "Reproductive (and Child) Health" programmes, with differing configurations in each country. Yet for those in sub-Saharan Africa that have had MCH/FP services since the 1970s-80s, apart from efforts to improve access to and quality of services, there has been little organisational change or change in the range of services provided since ICPD. However, over the past decade, the private health sector, both non-profit and commercial, has played an increasingly important role in providing family planning, antenatal and delivery care. Indeed, in some countries it would be fair to say that this is where most of the growth in these services has taken place.

The provision of services for diagnosing and treating STIs has a very different history. Until the 1980s, STIs were viewed primarily as a condition affecting men rather than women, requiring treatment rather than prevention, with little public health importance. As a result, and given the stigma attached to STIs, STI services received little attention and few resources in the public sector, with most services being provided through a small number of specialist clinics at large hospitals, often associated with dermatology services. As a result, many people diagnose and treat themselves, and by far the majority of STI treatment, much of it ineffective, continues to be available through pharmacists, drug sellers and traditional healers, with private sector formal providers also playing a major role.

This situation began to change in the 1980s when the high prevalence of STIs among women as well as men in sub-Saharan Africa was documented.<sup>3</sup> During the 1990s, the syndromic management approach was developed, due to the lack of resources for making aetiological diagnoses, in response to the large number of women presenting at primary health clinics with STI-like symptoms. In a deliberate attempt to maximize women's access to these services, STI syndromic management was "integrated" into existing MCH/FP services, rather than created as a vertical

programme. Although syndromic management is applicable also to men, it has tended to be adopted only in existing tertiary STI clinics and not as a service for men within primary health clinics. WHO and others developed algorithms and training materials that were used to facilitate the rapid adaptation of this "new" service, especially in countries where STIs were, or were thought to be, highly prevalent.

Evidence was emerging at the same time that the presence of RTIs/STIs increases the risk of HIV transmission,<sup>4,5</sup> and operations research in Mwanza<sup>6</sup> demonstrated that a comprehensive, community-based STI programme could drastically reduce HIV transmission rates, probably by shortening duration of STI infection.\* Consequently, much attention was focused on finding practical ways to integrate these services. Additional support for treating STIs has been presented in a recent US study which estimated that a 27% reduction in HIV transmission from a person infected with both an STI and HIV can be achieved in the absence of any other behavioural interventions.<sup>7</sup>

### **Limited expansion of STI prevention and treatment services since 1990**

Two problems have emerged since the euphoria of the early 1990s that have compromised the anticipated expansion of STI management as a mainstream sexual health service. First, the validity of syndromic management for the most prevalent symptom in women, vaginal discharge, was found to be poorer than expected among women attending MCH/FP services.<sup>8-12</sup> Evidence accumulated since then has led to the recommendation that management of vaginal discharge should be based on the assumption that the infection is a non-sexually transmitted vaginal infection.<sup>13</sup> Secondly, unlike the integration of FP services into MCH programmes, the introduction of STI services into MCH/FP programmes has not been well resourced, and there have been virtually no systematic or strategic efforts by Ministries of Health to ensure that

\*The Mwanza programme was exceptional (and exemplary) in that it included intensive community awareness-raising, strong partner notification procedures, enhanced supervision and logistics management, and syndromic management of STIs for women and men.

STI services, however configured, are properly mainstreamed into MCH/FP programmes.<sup>3</sup>

There are many reasons for this. At the time, syndromic management was still being developed and had not been widely accepted. Those working in MCH/FP programmes were not familiar with STIs or how to develop such services. The new funding from donors for STIs largely consisted of project-specific support for training and drugs, rather than broader programmatic development. Further, the question of where to situate STI services and to whom to provide them was unclear. Finally, STI management was valued mainly as a means to reduce HIV transmission. The fact that STIs are a sub-group of RTIs, along with endogenous and iatrogenic infections, and that certain STIs cause pelvic inflammatory disease and infertility in women if untreated, as well as morbidity in infants, was barely taken into account during this period.

Proposals to include STI management within reproductive health services were rejected. It was felt that STI services, as an HIV prevention mechanism, were more appropriately located in emerging national HIV/AIDS programmes, which at the time were more fledgling than actual.<sup>14,15</sup> However, both endogenous and iatrogenic RTIs may be associated with increased risk of HIV transmission. An association with trichomoniasis was posited early on<sup>16</sup> and an association between bacterial vaginosis and risk of HIV transmission has also been shown,<sup>17</sup> which suggests that closer attention to a wider range of RTIs in relation to HIV transmission is called for.

Another problem in most developing country settings is that what are still essentially MCH/FP programmes remain oriented to and are used mostly by married women. Providing STI services within the framework of MCH/FP care therefore does little to improve access to STI services for those who may be at higher risk of HIV than married women, especially in settings where HIV prevalence is not (yet) high.

Attempts were made, and continue to be made, by MCH/FP programmes to enhance early detection of STIs by training some primary health care providers to educate their patients about symptoms and treatment. STI (and HIV) prevention is also being emphasised through the concept of "dual protection" against pregnancy and infection during FP counselling sessions. The evidence to date, however, is that both the prevention and

management of STIs have not yet been effectively introduced beyond a few limited cases.

Consequently, although STI services now have a much higher profile than previously, and are consistently embraced as a key service within the *concept* of sexual and reproductive health, service provision at country level remains programmatically disjointed and disorganised. STI services are not widely provided through stand-alone public sector programmes or integrated into MCH/FP or HIV/AIDS programmes, and are still mostly not reaching those who most need them.

### **Contribution of SRH services to HIV/AIDS prevention: strengths and limitations**

The obstacles to integrating STI services into national sexual and reproductive health programmes do not detract from the relevance that such services have for contributing to the fight against HIV/AIDS. Women and men will continue to suffer from STIs and RTIs, and will come to clinics with these problems. It is arguably more demoralizing for health care workers not to be able to provide care than to apply a simple flowchart and treatment. SRH services have the potential to contribute to the fight against HIV/AIDS for the following reasons:<sup>18-24</sup>

- Women and men seeking other sexual and reproductive health services may be receptive to information and services concerning HIV when they understand the importance of preventing and managing HIV infection through the use of family planning and dual protection, safe antenatal and delivery care, and STI prevention and treatment.
- Antenatal care, child health care and family planning are now relatively accessible to the majority of the world's population through clinical, outreach and community-based programmes, and are being utilised by an increasing proportion of women of reproductive age. These women may not easily be reached through HIV prevention strategies, which are targeted at other specific audiences, especially core transmitter groups.\*

\*These are population sub-groups whose high-risk practices provide a conduit for HIV to move from one core group to another, or to enter the general population through "bridging" groups.

- Although married women are usually characterised as a “low risk” group in terms of sexual transmission of HIV, in high HIV prevalence settings they may well have become infected before marriage and may be at risk of acquiring HIV if their regular partners have other partners. This risk increases as the HIV epidemic becomes more generalised within a country and is an issue in most of east and southern Africa, which indicates an increasingly important role for SRH services.
- Antenatal, delivery and post-partum services offer the opportunity for preventing perinatal and breastfeeding-related HIV transmission; indeed, it is only through these services that these interventions can be provided. Moreover, induced abortion and post-abortion care services, stand-alone STI treatment, and programmes specifically for adolescents, all provide the opportunity to reach groups that other HIV strategies may not be reaching.
- Several of the technical and service skills needed to offer HIV-related information and prevention-related services (e.g. familiarity with gynaecological and obstetric issues, sexuality education that teaches sexual negotiation skills and promotes safer sex and other preventive behaviours, discussion of intimate behaviours and relationships and provision of contraception and condoms) are, in theory at least, already present in staff responsible for providing reproductive health services.
- Integrating HIV services within programmes providing other sexual and reproductive health services is anticipated to offer cost savings through sharing of staff, facility and equipment costs, as well as administrative and other overhead costs. Combining these services is also considered likely to reduce the cost to the individual accessing these services, but this has not yet been shown widely in practice.

Certain critical limitations also need to be considered if SRH services are to make a meaningful contribution. To maintain accountability, and because new programmatic structures for implementing SRH services are still being developed, most donors prefer to fund specific, often vertical programmes (e.g. family planning, antenatal care, STI treatment) rather than broader services. They also prefer to separate programmes and support for HIV/AIDS services

from those for SRH services, even when mechanisms such as sector wide approaches (SWAps) are in place.<sup>23</sup> Government ministries may also be promoting this tendency; many health sector reforms have separated sexuality education, SRH and STI/HIV/AIDS programmes from each other, making different ministries or segments of health ministries responsible for them, which also creates potential rivalry for budgetary control and funding.<sup>15</sup>

Concern has also been expressed<sup>3,25-29</sup> that many SRH programmes are already functioning poorly due to inadequately trained and poorly motivated staff, insufficient equipment and frequent stock-outs of critical supplies, inappropriate supervision and monitoring systems. Expecting them to undertake additional activities to address HIV/AIDS may be overburdening and hardly feasible. Although increased funding and better training and technical assistance could address many of these weaknesses, some are so entrenched that radical changes are needed. Moreover, SRH is not yet seen as a priority health issue in every country, or by all international stakeholders.

On the other hand, as SRH programmes become more engaged in the fight against HIV/AIDS, they may well receive greater political recognition, along with the commitment of financial and technical resources to strengthen SRH services themselves. Indeed, the engagement of SRH programmes in the fight against HIV/AIDS itself “has drawn attention to neglected issues in public health, such as the problem of other RTIs/STIs, and has brought impetus to efforts to create an appropriate environment for public health interventions in which gender imbalances are addressed and human rights are protected”.<sup>1</sup>

Closer links between SRH programmes and HIV/AIDS-related services, e.g. two-way referral links rather than parallel efforts, represent a valuable opportunity as well, not least in reaching wider audiences with more appropriately configured programmes. For example, HIV testing and counselling and STI services for sex workers could refer women for family planning and safe abortion services where the law permits,<sup>30</sup> and antenatal clinics could refer pregnant women for AIDS treatment and care.

To date, the comparative advantage of SRH services has mainly been considered in terms of their contribution to preventing the sexual and

perinatal transmission of HIV, with clear roles emerging for family planning, abortion, antenatal and delivery, and STI services. In addition, there are at least five other areas in which SRH services have much to offer, especially in care and support for those already infected, and as SRH programmes evolve and expand, they may be able to address more of these issues. The first is in peer counselling and support. For example, a "Mothers to mothers-to-be" programme in Cape Town, South Africa, was begun in a hospital-based antenatal clinic in conjunction with a preventing perinatal HIV transmission service. Mentor-mothers, trained as peer counsellors, engage HIV-positive women attending for antenatal care to share personal experiences, encourage adherence to treatment and assist with negotiating the hospital.<sup>31</sup>

Secondly, those responsible for managing SRH services have a role to play in ensuring that HIV is not transmitted through blood transfusions to women or infants during obstetric and perinatal emergencies, either through hospital blood supplies or other donated blood.<sup>32</sup>

Thirdly, HIV-positive women have an increased risk of abnormal cells of the cervix, vagina, anal and genital area, and a higher incidence of cervical intraepithelial neoplasia (CIN) and advanced cervical disease, and at younger ages, than women in the general population, a risk which increases with a diagnosis of AIDS and low CD4 cell counts.<sup>33-36</sup> In 1993, the US Centers for Disease Control designated invasive cervical carcinoma as a defining condition of AIDS.<sup>37</sup> Cervical cancer is a major killer of women in developing countries and screening and treatment services are thin on the ground. Again SRH service delivery would benefit if the need to prevent these cancers in HIV-positive women (and men) motivated the setting up of more clinical screening and treatment services for reproductive tract cancers.

Fourthly, marginalised populations such as sex workers<sup>30</sup> and injection drug users, who can get HIV infection through sharing unclean needles with an infected person, would benefit from SRH services, e.g. condom use to protect their sexual partners,<sup>38</sup> family planning and STI care, as their use of these services tends to be low.

Fifthly, SRH programmes should address men's sexual health needs and play a role in reducing sexual transmission of HIV and STIs between

men. Gay and other homosexually active men have experienced high levels of HIV infection and AIDS, and many are married and have sexual relations with women as well as men. A survey of 469 homosexually active men in gay community venues in Budapest, Hungary found that half the men had recently engaged in unprotected anal intercourse with another man and had had unprotected sex half the time. 26% had also had women partners in the previous year, and condoms were used in only 23% of occasions of vaginal intercourse.<sup>39</sup>

As the scale of the pandemic increases and responses to it multiply and diversify, more options become available to policymakers, donors and those working in programmes. While the argument can always be made that the HIV/AIDS pandemic is so great that any response that contributes to its reduction should be encouraged, this can lead to ineffective use of resources and systems that are better designed to address other needs. With increasing options comes the need to make informed choices, so that not only are effective strategies chosen but also limited resources used efficiently.

### Contribution of family planning services

The introduction of family planning services into national health care systems over the past three decades (and longer in some Asian countries) has been relatively well-financed and supported by high levels of technical expertise. Steadily declining levels of fertility and unwanted child-bearing worldwide have been largely attributed to these services, which are relatively well-functioning and have achieved an important degree of success. Moreover, as these services are directly concerned with the outcomes of sexual relationships, it is logical to expect them to be at the forefront of efforts to prevent sexual transmission of HIV. Contributions by family planning services to preventing HIV transmission can be classified into four broad categories:

- influencing sexual behaviour through education on risk reduction strategies as part of family planning counselling;
- educating service users about STIs, their symptoms and transmission, and appropriate health-seeking behaviour, and detecting and managing STIs;

- encouraging the use of condoms with or without other contraceptive methods for protection against unwanted pregnancy, STIs/HIV and infertility and discussing the fact that non-barrier contraceptives are not effective against STI/HIV transmission;
- prevention of mother-to-child transmission of HIV by ensuring that HIV-positive women and men have access to contraception and sterilisation services.

### Education on unsafe sex

Educating family planning users about the risks of having multiple partners and unsafe sex, or of having partners who have risky behaviour, has not been easy to implement for several reasons. Female nurses are the main type of family planning provider worldwide and most are not trained in sexuality counselling. Further, in community-based programmes, the provider may be a volunteer with minimal training, or may be related to or know the woman well, thus inhibiting discussions of such a personal nature.

Talking about sexual behaviour generally in the context of a family planning consultation, let alone the sexual relationships of the individual woman and her partner(s), requires skill on the part of providers. Discussing a woman's current and previous sexual behaviour is critical, however. Although recent evidence from Uganda shows that married men are twice as likely as married women to bring HIV infection into a marriage,<sup>40</sup> this still means that a significant proportion of the sexual transmission of HIV in marriage in Uganda is coming from the woman. Pisani<sup>24</sup> argues, on the basis of epidemiological data of higher rates of HIV infection in younger women, that "one of the biggest risk factors for men acquiring HIV infection in high prevalence areas is getting married to a woman who was infected during premarital sex". The extent of unprotected premarital sex among adolescents, frequently with more than one partner, has emerged in recent studies,<sup>41,42</sup> though the proportion varies from country to country.

Systematic literature reviews<sup>21,43</sup> reveal only a few documented examples of enabling family planning providers to include sexuality issues in counselling.<sup>44,45</sup> These studies found, however, that it was not difficult to facilitate discussions around sexuality if providers were adequately

trained. However, they also found that providers needed intensive training in technical as well as communication skills, with sustained follow-up, to be able to change from their traditional didactic interactions to dialogue around sexuality in which both the provider and service user felt comfortable. HIV testing and counselling of couples has been shown to be effective in stand-alone HIV counselling and testing services,<sup>46,47</sup> but less is documented about the feasibility of couple counselling and group counselling in the context of family planning services.

### Promoting dual protection

Using condoms during penetrative sex is a highly effective STI/HIV prevention strategy and promoting condom use is one of the strongest contributions that family planning services can make.<sup>48</sup> Ironically, it is also proving to be one of the most difficult, not least because of the overwhelming emphasis placed historically by family planning services on the efficacy of non-barrier methods for pregnancy prevention. Consequently, the condom has not been well promoted as a pregnancy prevention method for several decades and instead has gained a reputation (and the associated stigma) of an infection prevention method. Family planning services are now urgently trying to find ways of changing the perception of condoms so that they are seen as methods for "dual protection".\*

Although there has been a flurry of activity to promote dual protection over the past five years,<sup>49-51</sup> along with a variety of forms of safer sex (e.g. abstinence, non-penetrative sex, mutually faithful HIV-negative partnerships and negotiated use of condoms with partners outside a primary relationship), little practical experience has been documented or evaluated to demonstrate how such counselling can be feasibly and effectively complemented. Use of condoms plus another contraceptive method, barrier or non-barrier, is a strategy that presents several problems and little is known about its success as

\*Dual protection means the use of condoms alone, condoms plus another contraceptive, or condoms plus emergency contraception and/or abortion as a back-up for unintended pregnancy. If a condom fails to prevent STI transmission then bacterial infections can be treated but there is no "back-up" for viral STIs such as herpes and human papillomavirus, or for HIV.

a dual protection strategy, although studies from South Africa<sup>52</sup> and Kenya<sup>53</sup> show that 13–16% of condom users also use another method. The South African study concluded that “dual method use, rather than being a consensual choice, generally occurs only when a man’s aim of protecting himself from STIs coincides with his female partner’s goal of preventing unwanted pregnancy.”<sup>52</sup>

Promoting condoms may be more successful if pregnancy prevention is the main concern rather than (or in addition to) STIs.<sup>51</sup> This hypothesis is supported by a study among sex workers in Addis Ababa, Ethiopia,<sup>54</sup> which found that those who used condoms primarily for contraceptive purposes were statistically more likely to use them consistently and less likely to be HIV-positive than others.

The use of condoms with emergency contraception as a back-up in situations of suspected condom failure has yet to be systematically tested, although the approach has been piloted in a number of places. Even before emergency contraception was developed, however, Christopher Tietze had shown that the use of condoms with safe, early abortion as a back-up was a safe, effective form of protection against pregnancy for women,<sup>55</sup> and this applies from a dual protection point of view too.

The way in which women choosing non-barrier contraceptives are told that they do not protect against possible infection, and that the IUD is contra-indicated if there is a risk of STIs, is an equally important aspect of ensuring dual protection in situations with high STI/HIV prevalence, but is not well researched. A study recently completed in Zambia<sup>56</sup> found that 48% of women using the pill or injectable were told that their method did not protect against STIs. Being told this information increased the likelihood of the woman knowing this fact at the exit interview three-fold; women with higher education were more likely to understand this message. A study in Tanzania found that a talk on health education and counselling for informed choice was typically given to family planning clients in small groups, and included the message that condoms were the only contraceptive that protects against sexually transmitted infections such as HIV, but nothing more. One Tanzanian service provider was observed to have said only: “You should use one if you are concerned about that sort of thing.”<sup>57</sup>

Certainly, for those who do not know they are at risk of HIV/STIs or who deny they are at risk, this information is of little value. A related, as yet untested suggestion for strengthening condom promotion messages, is to focus on the high value placed on preventing infertility in women as part of messages that condoms prevent STIs.<sup>58</sup> As HIV infection itself reduces fertility with disease progression,<sup>59</sup> there is further good reason to promote condoms for this reason.

### **Education on STIs**

Educating and counselling family planning users on STIs is expected to contribute to earlier and more effective care-seeking behaviour among women who suspect they have an infection. Evidence from a variety of African countries and settings indicates, however, that such “integrated” counselling is not only relatively rare, but of extremely variable quality.<sup>20,25,26,56</sup> Efforts to introduce such counselling have conventionally used strategies of in-service refresher training for primary care staff, and revision and dissemination of service protocols and guidelines. Assessments of such efforts show that they are only succeeding in producing the anticipated changes in provider practice if concerted efforts are made to link training with the dissemination of revised guidelines.<sup>60</sup> More systematic approaches, such as integrating STI education into pre-service training, would seem to be the logical step to take.

Some successes with educating family planning users about STIs have been noted, however. A project in Mexico informed family planning users about contraceptive methods and encouraged them to consider their personal STI risk factors.<sup>61</sup> The women who chose a contraceptive method themselves were more likely to choose condoms than those whose method choice was based on the physician’s judgement. This difference was even more pronounced for women found to have a cervical infection. Thus, giving women sufficient information to assess their own STI risk before choosing a contraceptive method may be at least as effective as providing risk assessment algorithms for providers to use.

An operations research study in Nigeria, in which patient education on STIs and self-risk assessment were made central features of the family planning consultation, also found



JAN BANNING / PANOS PICTURES

STI clinic, Cambodia

promising preliminary results, with the proportion of visits resulting in acceptance of condoms (mostly the female condom) increasing from 2% to 9%.<sup>62</sup> Operations research studies undertaken in Zimbabwe<sup>10</sup> and Kenya<sup>11</sup> also attempted to systematically re-orientate family planning and antenatal care services so that they included both STI education and screening. They did this through training staff, guaranteeing drug supplies and developing a standardized checklist to guide staff through all components during the consultation (including a full history, clinical and pelvic examination, 23-question risk assessment, and education on STIs and HIV/AIDS). Analyses of checklists completed by providers suggests that the checklist greatly improved the counselling of service users, who not only received better family planning information, but were also well-educated on a range of STI-related issues.

A series of experimental operations research studies in several countries in Latin America have also demonstrated that an algorithm enabling the provider to screen for a range of reproductive

health needs, in addition to that for which the person came, can significantly increase the proportion of clinic attendees who are informed about or offered additional services.<sup>63</sup> For example, based on epidemiological data to determine which conditions to screen for, a hospital-based gynaecology clinic in Brazil set up an integrated SRH programme that included screening and treatment for reproductive and other cancers, STI/HIV/AIDS and pelvic inflammatory disease, family planning and menstrual disorders for women under 45, and a modified programme for women over 45.<sup>64</sup>

Integrating condom promotion and sexual health education activities into family planning services is therefore feasible and effective in providing information. An exhaustive review of the literature found improvements in knowledge of STIs and prevention methods among service users, along with some changes in condom acceptance (though a more doubtful impact on condom use). Expectations of “impact” on condom use or reduced risk being shown in any immediate way are unwarranted, however.<sup>65</sup>

Having an impact on the HIV and STI epidemic also depends on changes in the policy-related, socio-economic and cultural contexts that make people vulnerable and put them at risk.

### Detecting and managing STIs

Because stand-alone STI services are uncommon, training of primary health care nurses in syndromic management of STIs in MCH/FP services was the primary focus of much of the early work on the interface between MCH/FP and HIV/AIDS programmes control. Apart from expensive laboratory tests, existing methods, including syndromic management, fail to identify and manage appropriately a substantial proportion of women with infections such as gonorrhoea and chlamydia (i.e. have low sensitivity), and identify many women as having an infection who do not (i.e. have a low positive predictive value). The latter shortcoming is of particular concern because treating uninfected women with vaginal discharge (the most commonly presented symptom) for an STI creates unnecessary expenditures and potentially increased drug resistance.

Attempts to improve the performance of syndromic management have included using algorithms that take into account local epidemiological data and the use of risk assessment tools, including physical and vaginal examination. Population-based and reliable local epidemiological data are lacking in most developing countries, however, and the use of risk assessment tools has not substantially improved performance.<sup>8-11</sup> Vaginal examinations (including speculum examinations) of women who spontaneously report STI symptoms during family planning visits improve the performance of the syndromic approach, but only slightly.<sup>10</sup> Syndromic management of genital ulcers or lower abdominal pain reported in family planning visits remains the recommended approach in resource-poor settings. Vaginal discharge algorithms that limit treatment to vaginal infections have much better sensitivity and specificity and are recommended for populations where STI prevalence is low. Identifying women (with or without vaginal discharge) who have asymptomatic cervical infection requires other screening strategies.

Detection and management of STIs based on symptoms and signs are hampered because

STIs in most women are likely to be asymptomatic. Theoretically, this problem could be avoided by using laboratory tests to screen all family planning service users and treating those proving positive, or by presumptively treating all of them as an integral part of the service. The first strategy would be logistically impossible, however, and the cost astronomical. In Zimbabwe, for example, the estimated additional cost of laboratory screening would be US\$25.77, and of presumptive treatment an additional US\$13.50 per family planning user visit.<sup>10</sup> With the latter, however, there would be a waste of drugs through treatment of uninfected women and the risk of drug resistance. Rapid, low-cost STI tests without the need for laboratory facilities are also being developed, which may become cost-effective in areas with high STI prevalence. Presumptive treatment of STIs in the general population and in specific sub-groups is currently being tested in Africa through theoretical modelling,<sup>66</sup> community trials such as that in Rakai, Uganda,<sup>67</sup> and operations research<sup>68</sup> in mining communities in three southern African countries. This strategy may yet prove to be of value in situations where the prevalence of HIV and other STIs is high, and where mass treatment is possible—including for women attending family planning services in some areas of Africa—and should be considered for future programmatic directions.<sup>69</sup>

One "hybrid" strategy would be to screen all family planning clinic attendees syndromically, with or without risk assessment, and then use laboratory tests for those suspected of having an RTI, as modelled in the Zimbabwe study.<sup>10</sup> Although this strategy did not result in a larger proportion of women with STIs being correctly identified and treated (more than one-third were missed), it did eliminate unnecessary treatment of uninfected women. This strategy would double the additional cost per family planning user (from US\$5.30 to US\$10.30), but it has the advantages of eliminating unnecessary treatments, not wasting valuable drugs and reducing the likelihood of drug resistance. Among those women definitely found to have an STI, partner notification is then more likely to be feasible. With syndromic management alone, because of the uncertainty of infection, partner notification is difficult to implement, with the result that women who

actually had an STI before treatment are at risk of re-infection and remain at elevated risk for HIV. If the costs of managing both a sustained STI and potential HIV infection are taken into account, however, it may produce a different perspective on the cost analysis.

### **Ensuring access to contraception and sterilisation for those with HIV to prevent pregnancy**

Documented experience with contraceptive use by HIV-positive women, apart from condoms, is limited. In Thailand, sterilization has historically been an important part of the family planning programme, and sterilization has also been offered to pregnant women found to be HIV-infected. For asymptomatic HIV-positive Thai women wanting reversible contraception, Norplant implants have also been found to be safe, efficacious and well tolerated in the immediate post-partum period.<sup>70</sup> A study in antenatal clinics in two cities Brazil found that 57 of 60 HIV-positive women, the great majority of whom had two or more children, did not wish to become pregnant again, and 43 of the 57 expressed a strong wish to be sterilised at delivery or post-partum.<sup>71</sup>

### **Adding STI services to MCH/FP services strengthens both**

A comprehensive review commissioned by WHO found that efforts to integrate STI prevention activities with MCH/FP services have improved providers' attitudes, counselling skills and performance for family planning services, despite initial concerns that an integrated approach might overload staff.<sup>21,65</sup> It also showed that integrated services improve user satisfaction, in part because such services provide a more comprehensive response to their needs and an opportunity to discuss sexual and gender relations. The review gives several examples (albeit drawn from service statistics, which can be unreliable) of integrated services producing not only higher levels of condom distribution but also increases in the adoption of other contraceptive methods. A study in Zimbabwe<sup>72</sup> on the organization of clinic services and how providers spend their time suggests that how providers use their time, rather than the amount of time they have available, is what matters.

### **The contribution of MCH and delivery services**

In most developing countries, the great majority of pregnant women make at least one visit for antenatal care during pregnancy, and a significant proportion of women deliver with a skilled attendant, make at least one post-natal clinic visit and several visits for immunizations. These visits create the opportunity to give information and services to prevent sexual transmission of HIV, including HIV testing and counselling; education on risk reduction (especially pertinent during pregnancy and post-partum, as husbands/partners may pursue other sexual relationships); promotion and provision of condoms during pregnancy and family planning/dual protection afterwards; education on the adverse consequences of STIs on pregnancy and pregnancy outcomes; and detection and management of STIs, including syphilis.

Antenatal and delivery care services can contribute significantly to prevention of mother-to-child transmission of HIV (PMTCT), which occurs in up to 35% of infants born to HIV-positive women, with approximately 5% of this transmission occurring during pregnancies carried to term, 15% during delivery and 15% during breastfeeding. Preventing MTCT can start before pregnancy or during antenatal care and continue during labour, delivery and the post-partum period, using HIV testing and counselling as an entry point and antiretroviral treatment options for both infants and mothers. In addition to providing PMTCT services, linking maternity services with services providing highly active antiretroviral therapy (HAART) for HIV-infected mothers greatly increases the contribution of SRH services to HIV/AIDS treatment.\*

\*HAART is currently the gold-standard, three-drug combination therapy for adults at a stage of infection requiring treatment. Minkoff advises<sup>73</sup> that in caring for HIV-infected pregnant women and prescribing HAART, obstetricians must always bear in mind their dual responsibility to provide optimal care to the mother and reduce the likelihood of MTCT of HIV. "The core goal of all medical therapy is to bring the patient's viral load to an undetectable level. When that goal is reached, the chance of transmission to the child is minimized, the need for a caesarean delivery is reduced, and the patient's prognosis is optimized."

In the Women and Infants Transmission Study undertaken in the United States,<sup>74</sup> for example, the HIV transmission rate to infants was only 1.2% for 250 women receiving HAART during pregnancy. However, questions of which section(s) within a public sector service will organize and budget for such services (e.g. whether it should be the MCH directorate or the HIV/AIDS control programme) and whether poor women can access HAART through private sector antenatal and delivery care add political and rights dimensions to this issue.

### **Counselling and testing pregnant women for HIV and other conditions**

Where HIV prevalence rates among pregnant women are high, 25% and more in parts of sub-Saharan Africa, antenatal care services offer a critical opportunity for women to learn their HIV status and to obtain information on how to protect their health and prevent HIV infection (or re-infection if they are already HIV-positive). HIV testing and counselling during antenatal care is now available in many countries, and since treatment for PMTCT became feasible and affordable, there appears to be increasing demand, especially in sub-Saharan Africa.<sup>75</sup> It is usually provided in three main ways, often depending on the prevalence rates in the antenatal population:

- On the basis of a list of questions related to risk, a woman who appears to be at risk is offered HIV counselling and following that testing, which she can decline or accept.
- All women attending antenatal care are given HIV education and are offered counselling and testing, which they can decline or accept.
- Following HIV education, an HIV test is carried out as one of a number of routine antenatal blood tests, from which the woman can opt out.

De Cock et al argue<sup>76</sup> for the third option above, but suggest that it is only ethically acceptable if treatment is available, whether for opportunistic infections, PMTCT or HAART, if a woman learns she is HIV-positive. Those who oppose making HIV testing routine argue that the opportunity to opt out may be downplayed or omitted, depriving women of a real choice.

The financial and logistical implications of routine HIV testing and counselling in antenatal clinics in high prevalence settings need costing and pilot testing. New, rapid HIV tests can make an important difference,<sup>77</sup> in that their use will reduce the substantial number of women who do agree to be tested but do not return for their results.

Counselling and testing in pregnancy should be organized according to local patterns of antenatal clinic attendance and offered as early as possible. Most women who learn they are HIV-positive at this time will wish to continue their pregnancies, and where possible to arrange for PMTCT treatment, as well as treatment for themselves if appropriate, but some women may decide to have an induced abortion. Abortion to protect women's health and lives is legal in almost all countries, and HIV infection is considered to be sufficient grounds for legal abortion under such law in a number of countries.<sup>78,79</sup>

The quality of counselling that accompanies HIV testing, antenatally or elsewhere, is extremely variable. Expectations that this alone can empower women to discuss their status with their partners, or influence women or their partner's fertility intentions or the extent of protection they use, or ultimately have an impact on incidence of infection, were probably unrealistic from the start. Only multiple strategies have succeeded in reducing the epidemic to date, and these cannot be focused on individual behaviour only. Recent research from Kenya and Zambia on counselling and testing in antenatal care suggest that good counselling, which includes development of communications skills for this purpose, can increase discussions with partners about HIV and HIV testing. Indeed, in Kenya large increases in HIV testing by male partners are being found in on-going studies (Personal communication, Naomi Rutenberg, 10 July 2003).

Antenatal care services have not traditionally emphasised risk reduction counselling or providing condoms to pregnant women, although with the current focus in many countries on re-organising antenatal services in line with the package recommended by WHO,<sup>80</sup> it is hoped that all these services will receive more attention. Although counselling women during pregnancy on post-partum family planning has proven an effective strategy for increasing the

proportion of women using contraception at six months post-partum, this should now include a focus on dual protection as well as on contraception.

HIV-positive pregnant women have a higher risk of anaemia related not only to poor nutrition but also to malaria, and are at high risk for tuberculosis. Hence, other routine aspects of antenatal care in high HIV prevalence areas need to include testing and treatment for all these conditions in pregnant women.<sup>81,82</sup>

### **Detecting and managing STIs in pregnancy**

Syphilis can have adverse effects on the fetus as well as the pregnant woman, and syphilis, gonorrhoea and chlamydia can all have adverse effects on newborns as well. Together with trichomoniasis, they can all increase the likelihood of HIV acquisition. The universal screening of pregnant women for syphilis has long been promoted as a cost-effective strategy but limited resources have meant that the majority of developing country antenatal services rely either on referring women to another clinic or sending blood off-site for screening. A 1996-97 review of 22 sub-Saharan African countries estimated that only 38% of women attending antenatal services were being screened, and that over one million pregnant women with syphilis attending antenatal care were being missed annually, resulting in 600,000 adverse fetal and infant outcomes that could have been averted.<sup>83</sup>

Some efforts are now being made to introduce on-site testing and management (including partner notification). Studies in Nairobi, Kenya have indicated that this is both feasible and effective in improving the proportions of women tested and treated, and adds only a small amount to the cost of an antenatal visit.<sup>84,85</sup> A recent study in rural South Africa, where an existing off-site programme was already functioning, found that although treatment was completed more quickly with on-site testing, it did not translate into higher treatment rates compared with the existing off-site testing, and also did not reduce perinatal mortality.<sup>86</sup> However, the off-site programme was functioning much more effectively than off-site programmes elsewhere in Africa, so the lack of better results is not generalisable. Once a rapid test for detecting syphilis becomes available without the

need for laboratory equipment, research will be needed to compare the relative cost-effectiveness of each strategy and how best to introduce them.

### **Preventing mother-to-child transmission of HIV**

Giving antiretroviral therapy to pregnant HIV-positive women decreases mother-to-child transmission rates significantly during pregnancy and delivery. For women who themselves are not on HAART, a regimen starting at 36 weeks of pregnancy (short course AZT) and one that involves medication around the time of delivery only (single dose nevirapine) are both highly effective.<sup>87</sup> How this service should best be offered is currently the subject of operations research on alternative configurations. These cover drug regimens, ways of assisting women with drug adherence, increasing the involvement and support of husbands/partners, reducing the stigma associated with receiving HIV services in antenatal and delivery settings, and increasing the reach of such services to women who deliver at home rather than in a medical facility, through training community health workers and establishing referral links. The Ndola Demonstration PMTCT Project in Zambia, for example, is being implemented in six clinics serving seven peri-urban settlements, by three groups: the Zambia Voluntary Counselling and Testing Services provide supplies for and supervise the quality of HIV testing, the MTCT Working Group provides supplies of antiretroviral drugs, and the District Health Management Team supplies the clinics with the reagents for routine haemoglobin testing and iron supplements.<sup>88</sup>

Ensuring safe pregnancy and delivery is a high priority for SRH services, and the urgency is reinforced by the possibility of HIV transmission to infants during delivery by HIV-positive mothers. Having a trained attendant present during delivery, preventing sepsis and tears, avoiding invasive procedures and unnecessary episiotomies are recommended for enhancing safe delivery. With HIV-positive women, the duration of membrane rupture needs to be reduced, and turning breech babies and procedures that may break the baby's skin need to be avoided. Although elective caesarean section prior to onset of labour also reduces the likelihood of HIV transmission, its use in low resource settings

should be avoided in the absence of medical indications, due to the elevated risk of complications for immuno-compromised HIV-positive women.<sup>89-92</sup>

Breastfeeding transmission to infants in developed countries has been greatly reduced because HIV-positive women are strongly advised and generally decide not to breastfeed.<sup>93</sup> Because alternatives to breastfeeding are often not acceptable and may not be safe in many developing country settings, HIV transmission rates of 15-20% with breastfeeding of six to 12 months duration are common. There is an urgent need to determine whether antiretroviral treatment can be developed for infants that safely extends protection through the breastfeeding period and beyond, as appropriate. Trials are being undertaken to determine whether ongoing HAART used by the mother, not only during pregnancy but also during breastfeeding, will extend this protection to the baby.

Meanwhile, in order to help to reduce HIV transmission through breastmilk, antenatal and post-partum programmes should provide guidance and support to women on locally appropriate, safe infant feeding alternatives, based on local assessments and/or formative research. Recommendations and guidelines are regularly being updated as more evidence becomes available. Those giving infant feeding counselling need to provide up-to-date information, help women to make informed choices and monitor their progress.<sup>94</sup> Experience from Kenya and Zambia<sup>75</sup> indicates that following training, using an adaptation of the WHO curriculum,\* health workers are more confident and more likely to provide women with appropriate infant feeding counselling. Where training in infant feeding counselling for HIV-positive mothers has not been carried out, breastfeeding may still be promoted, even in high HIV prevalence areas. Furthermore, infant feeding counsellors may believe women have no other option but to breastfeed and may not explain other infant feeding options accurately. They may need training in non-directive counselling and accurate information too. They may also be HIV-positive themselves.<sup>95</sup>

Antenatal and delivery services which provide HIV testing are identifying a cohort of HIV-

positive women who, together with their families, will need treatment, care and support for the remainder of their lives. Some programmes have therefore developed referral linkages with existing HIV/AIDS services run by national or international NGOs for long-term care. For example, in the Ndola Demonstration Project, Zambia<sup>88</sup> women are referred to the WHO PROTEST programme for preventing tuberculosis and other opportunistic infections, to the World Food Programme for nutritional supplementation and to community-based groups for psychosocial, economic and family support.

To develop strategies for organising sustainable referral links, the "MTCT-Plus" initiative was established in 2001, coordinated by Columbia University in the US. Through an initial 12 demonstration sites in seven African countries and Thailand, the initiative will provide:

- a package of services for infected women, and eventually members of their families, that includes education, counselling, psychosocial support, PMTCT, prophylaxis and treatment for opportunistic infections and HAART,
- support for community outreach and education, and linkages to local organizations and resources,
- procurement and delivery of antiretroviral therapy and other medications for related HIV disease, and training, technical assistance, laboratory support, site monitoring and other support services.<sup>96</sup>

### Where do STI services belong?

Screening and treatment for STIs are integral elements of both SRH care and HIV/AIDS control. Services to detect and manage STIs and endogenous RTIs have not been consistently organised within SRH or HIV/AIDS programmes, nor have they been as well resourced as MCH/FP services. However, in the past decade, they have gained higher visibility both through the ICPD Programme of Action and because they are co-factors of sexual transmission of HIV. Because of the tendency to vertical programming, this duality has created a programmatic dilemma for countries—should STI services be managed by programmes affiliated to and funded through resources for HIV/AIDS or for SRH? Or is some combination preferable?

\*At: <<http://www.popcouncil.org/horizons/pmcttc.html>>.

To answer this question, it is important to bear in mind the multiple consequences of untreated STIs in both sexes. These include poorer pregnancy outcomes (an increased risk of miscarriage and stillbirth), infertility and pelvic inflammatory disease in women and increased risk of HIV infection for both women and their partners. Furthermore, as long as SRH (or MCH/FP) programmes provide services mainly to married women, it will remain the case that men, unmarried women and others who are at risk of STIs will not be reached. On the other hand, through HIV/AIDS programmes it is only those who are at high risk of sexual transmission of HIV (and STIs) that STI control services for women are likely to be provided. From this perspective, it seems clear that strategies to reduce the impact of STIs need to involve both HIV/AIDS control programmes and SRH programmes in some form.<sup>97</sup>

In spite of the decline in interest in STI control, following the shifting of priorities away from prevention of HIV infection to treatment and care of those with HIV, and continued uncertainty about how to interpret the results from the studies in Mwanza, Rakai and Masaka,<sup>6,98-102</sup> all of these attempts at reducing the global STI epidemic can serve as signposts of how to move forward in ways that are beneficial in themselves and have an impact on the HIV epidemic. New evidence is emerging from smaller-scale studies of the effectiveness of community-level STI services in emerging HIV epidemic settings, e.g. in two areas of Nairobi, Kenya, which have produced impressive improvements in the practice of safer sex and reductions in reported STI incidence.<sup>103</sup> Hence, within primary health care programmes, STI services configured as community-level interventions could feasibly be introduced in many African and other countries. As Stephenson and Cowan affirm: "the importance of improving STD services in areas of high prevalence is not in doubt";<sup>104</sup> the issue is how to do it.<sup>105</sup>

Furthermore, when trying to integrate STI detection, management and prevention into existing MCH/FP services, STI services need to be better planned and implemented than in the past, when very little was actually "integrated". Past interventions focused mostly on staff training, HIV counselling and testing, and prevention in the form of condom promotion, but attention

is also needed to other critical system components, such as functioning and accessible referral clinics, regular supplies of drugs and other supplies, strong supervision and community-level education to reach the population as a whole. In short, those components that support STI control as well as prevention, and closer interaction with the community as well as those attending services, must be greatly strengthened. Critical to the success of a primary health care model of STI services is the potential to reach men as well as women with education and services. For this, primary health care facilities need strengthening generally.

SRH programmes have a history of reaching mainly adult, married women, and often do not reach core transmitters. HIV/AIDS-oriented programmes, on the other hand, have tended to take specialized approaches in order to reach mainly these core groups. However, given the fact that core groups of HIV transmitters may not necessarily be small in number, as is the case in much of sub-Saharan Africa. If SRH programmes and HIV/AIDS programmes make greater efforts to develop their services in tandem, they could ensure that together they reach the main groups at risk of STIs as well as HIV.

Lastly, what about the formal or informal private sector for STI care, which have been found lacking in training, diagnostic capacity and correct provision of drugs?<sup>69</sup> The development of regulations on who can and cannot provide services, the requirement that these providers have appropriate training, and research on the feasibility of linking public and private sector STI services should all be considered.

### **Expanding coverage inside and outside the clinic setting**

From an HIV prevention perspective, reaching both core transmitters of HIV and those who serve as "bridges" between them and the wider population is strategically important, because it is they who will predominantly maintain the epidemic. Men in most parts of the world have not traditionally attended public clinics (with or without their partners) to obtain family planning, condoms or STI treatment, or to accompany their women partners for antenatal or child health visits.

Opportunities for reaching men through SRH services are now being considered, but very few ideas are actually being prospectively tested and evaluated. The two preferred approaches have been: i) to make condoms freely available and easily accessible at clinics for women and for the occasions when men visit, for whatever purpose, and ii) encouraging men to accompany their partners for antenatal care or family planning, during which they can be exposed to educational messages on STIs and HIV transmission, given condoms and offered an HIV test and STI screening and treatment. Operations research studies that seek to involve men in antenatal and family planning consultations are about to be completed in South Africa, India, Zimbabwe and Nigeria.

These interventions will only reach men as partners of women attending MCH/FP services, however, not men who are single and in less steady relationships, homosexually active men or the partners of women who do not use family planning or are pregnant. Primary health care programmes should consider developing the concept of "sexual health services", which would allow for an expansion in coverage of SRH services to population sub-groups who are not (primarily) seeking reproductive health care.

Because homosexuality is still widely disapproved socially, meeting the needs of men who are homosexually active has required outreach efforts, including in countries where homosexuality is illegal. This is important not only in the Americas, where the reported prevalence of HIV among homosexually active men is high,<sup>106</sup> but also in other regions, where it may be less visible due to stigma.<sup>107</sup>

Little is known about the extent to which sex workers (female and male) use SRH services, or where they obtain contraceptives and condoms. A study in Abidjan, Côte d'Ivoire, found that only 28% of sex workers surveyed had obtained STI treatment from a public clinic or hospital.<sup>108</sup> In Cambodia, a study in STI clinics set up for women sex workers in Phnom Penh and Sihanoukville found that few brothel-based sex workers had ever attended public or NGO clinics for family planning services. The great majority were relying on condoms alone for dual protection; less than 2% were currently also using another contraceptive method, and

induced abortion was said to be common. Many of the sex workers wanted to know more about available contraceptive methods, but some key informants were concerned to ensure that if contraceptives were made more available, consistent condom use would not decrease.<sup>30</sup>

Sexually active adolescents and youth, especially in sub-Saharan Africa, but also sub-groups in Latin America and Asia, as well as street children in all regions, are at an elevated risk in high HIV prevalence settings.<sup>109</sup> However, they are largely apprehensive about going to public SRH services and may be actively dissuaded by both clinic policies and staff attitudes. Strategies to make clinic settings more "youth-friendly" or to provide separate services for adolescents and young people are expected to increase the proportion who obtain information and services. A small number of studies are exploring the feasibility and acceptability of these strategies.<sup>110,111</sup> Several studies in developing countries have also started to evaluate school-based<sup>112</sup> and social marketing strategies<sup>113</sup> for reaching adolescents.

Existing evidence strongly suggests that multiple strategies to reach young people are called for.<sup>109</sup> SRH services in clinic settings can try to reach this age group for STI/HIV prevention as well as contraceptive and condom promotion. This age group often have sex irregularly and may change partners over relatively short periods of time. If young, single women become pregnant, they may carry their pregnancies to term even if these were unwanted, and will need antenatal and delivery care. Others will seek abortions, with the proportion ranging from up to 9% in one South Africa study<sup>114</sup> to 50% in estimates in Argentina<sup>115</sup> to a majority in Europe.<sup>116</sup> Family planning service providers, including those in the private sector, may be able to help young women to cope with unintended pregnancy more safely, including referrals for safe abortions where legal.

Furthermore, using peer educators to provide condoms and HIV risk reduction education is increasingly being tried, particularly through social marketing and other community- and school-based programmes, and mass media educational programmes. Whether these activities should be organised through or in collaboration with SRH programmes (and especially those in the public sector) needs further attention,

taking both in-school and out-of-school youth into account.

Some SRH services that could contribute to the fight against HIV/AIDS are also provided through public sector community-based or outreach components. For example, research clearly shows that community-based FP distribution (CBD) programmes can effectively promote and deliver condoms to men (and women),<sup>117</sup> especially when male agents are used. Whether this approach increases the overall prevalence of condom use or substitutes for other sources of supply has never been evaluated, however. The capacity to reach adolescents with family planning through CBD can be reduced because many CBD agents are not sympathetic to or accepting of sexually active adolescents, especially those who do not have children.<sup>118</sup> These attitudes were even found in a CBD programme explicitly oriented towards youth.<sup>119</sup>

CBD programmes were established primarily to provide family planning. Because of their advantages in terms of outreach and a peer education approach, several efforts have been made to train CBD providers to include STI and HIV/AIDS education, and to a lesser extent counsel on sexual risk reduction strategies. Two studies from Ghana have shown contrasting results. One found that CBD agents gave information on STI prevention in 90% of consultations following training,<sup>119</sup> while in the other,<sup>120</sup> STIs were discussed in fewer than half the interactions.

### **Policies and programmes: future perspectives**

As this and other reviews have shown,<sup>43,89</sup> the contribution that SRH services can make to HIV prevention (and increasingly to HIV treatment and care) can be significant. For services such as family planning and condom provision, it is a matter of continuing to provide existing services with some re-orientation towards dual protection, and HIV prevention, and expanded outreach to those at greater risk of STIs/HIV. For others, such as antenatal care and STI care for adolescents and core transmitters of HIV, some form of "integration" will be necessary to link services that have not previously been offered together, either through joint provision or referral. Still other services, such as cervical cancer

screening and treatment, remain to be initiated at all in many settings. Issues of stigma also operate to restrict and complicate access to care. Although some experiences of integrating services have been less than comprehensive and at times disappointing, improvements in even partially successful approaches should be sought and new ideas tested, to better understand how these might be improved and maximised. Thus, potential gains may be achieved even with imperfect strategies.

An important limiting factor in the contribution SRH programmes can make to HIV/AIDS prevention and treatment is the continuing legacy in developing countries that they are still directed primarily at married and fertile women. Hence, most SRH service users are more at risk of acquiring HIV than transmitting it. It may be in this aspect that change needs to take place before other changes described here will succeed. However, simply by improving basic standards of care and uptake of services, SRH services can contribute to reducing disease and complications among the broad population base using SRH services. Strengthening the capacity of SRH services to contribute to the fight against HIV/AIDS will, in addition, require improved infrastructure, equipment and supplies, better staff training and supervision, and assured drug supplies.

These organisational transitions are being undertaken in developing country contexts sometimes characterised by weak health systems that may be undergoing radical reform. Improvements in policies and programmes, service protocols and staff skills, initiated since ICPD, continue to need reinforcement and promotion, particularly the concept of an SRH programme as a coherent and comprehensive package of services. Empirical evidence about what works and does not work is slowly but steadily growing. Clear progress is being made<sup>121</sup> but must be sustained.

This review suggests concentrating on approaches that appear to be effective, feasible and acceptable, what it takes to make them work better, and critically, what effect they have on HIV/AIDS incidence and prevalence. In doing so, attention must clearly be paid not only to the interventions themselves, but also to the people and the health systems supporting them and the epidemiological and

socio-economic context in which they are expected to function.

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## Résumé

Près de 80% des cas de VIH sont transmis sexuellement et 10% par voie périnatale ou pendant l'allaitement. Le secteur de la santé s'est donc tourné vers les programmes de santé génésique pour guider la prévention de ces formes de transmission, et plus récemment pour entreprendre certains aspects du traitement. L'article examine et évalue les contributions faites à ce jour par les services de santé génésique à la prévention et au traitement du VIH, principalement par les services de planification familiale, de traitement des IST et de soins prénatals et obstétriques. Il décrit d'autres problèmes de santé génésique rencontrés par les femmes séropositives, comme le besoin de services d'avortement, de traitement de la stérilité et de prévention et traitement du cancer de l'utérus. L'article montre que les programmes de santé génésique peuvent contribuer à la prévention du VIH et à certains aspects du traitement, et que la lutte contre les IST est importante pour la santé génésique et pour la lutte contre le VIH/SIDA. Il en conclut qu'il convient de mettre au point un programme plus intégré de soins de santé génésique et de lutte contre les IST et le VIH/SIDA pour incorporer certains services, élargir les services à de nouveaux groupes de population et créer des centres d'aiguillage efficaces afin d'optimiser la portée et l'impact de ces deux programmes jusqu'à présent essentiellement verticaux.

## Resumen

Un 80% de los casos de VIH son transmitidos sexualmente, y un 10% más por la vía perinatal o la lactancia. Por lo tanto, el sector de salud ha esperado de los programas de salud sexual y reproductiva liderazgo y orientación en la provisión de información y consejería para la prevención de estas formas de transmisión, y más recientemente para la provisión de algunos aspectos de tratamiento. Este artículo examina y evalúa los aportes de los servicios sexuales y reproductivos—principalmente los servicios de planificación familiar, las ITS y atención antenatal y de parto—a la prevención y tratamiento de VIH/SIDA. Describe otros problemas de salud sexual y reproductiva experimentados por mujeres viviendo con VIH, tales como la necesidad de servicios de aborto, de tratamiento de la infertilidad, y de prevención y tratamiento de cáncer cervico-uterino. Muestra que los programas de salud sexual y reproductiva pueden hacer un aporte importante a la prevención de VIH y a ciertos aspectos de tratamiento, y que el control de ITS es importante tanto para la salud sexual y reproductiva como para el control de VIH. Concluye que se debería crear un programa más integrado de atención en salud sexual y reproductiva y control de ITS/VIH/SIDA que incorpora ciertos servicios a la vez que extiende el alcance a nuevos grupos poblacionales y crea cadenas de referencia que optimizan el alcance y el impacto de lo que hasta ahora son esencialmente dos programas verticales.