

MDG 6:

Combat HIV/AIDS, malaria and other diseases

Target 7: By 2015, to have halted and begun to reverse the spread of HIV/AIDS

Target 17: In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries

The HIV/AIDS epidemic is a dramatic and complex health problem worldwide; it is estimated that 4.3 million people around the globe were infected during the year 2006 alone (UNAIDS/WHO, 2006). The number of people living with HIV in the LAC region in 2006 has risen to an estimated 1.7 million – compared to a 2003 estimate of 1.6 million. Approximately 65,000 died of AIDS, and 140,000 were newly-infected.¹ The Caribbean is considered the second most affected region worldwide, even though there are substantial differences between countries, with an estimated 19,000 fatalities in 2006, making AIDS the leading cause of death among adults aged 15–44 years. The total number of people living with HIV in the CAREC countries in 2003 was estimated at 109,395 (Caribbean Commission on Health and Development, 2003). Estimated national adult HIV prevalence exceeds 1% in Barbados, the Dominican Republic, Jamaica, and Suriname, 2% in the Bahamas, Guyana, and Trinidad and Tobago, and is over 3% in Haiti. In Cuba, on the other hand, it has yet to reach 0.2% (UNAIDS, 2005 b).

The spread of HIV is related to both social and biomedical factors and it will not be reversed unless there is broad based socio-cultural and behavioural change. In the LAC region, the epidemic is inextricably related to gender inequality; cultural values, norms and taboos towards sexuality (including homophobia); weakened and poorly integrated health systems; limited human and financial resources; insufficient and narrowly focused prevention and treatment interventions; stigmatisation of people living with HIV; insufficient quality of sexuality education; internal and international migration; and unsafe drug use. As in other developing regions, social processes operate to create health disparities (Stall & Mills, 2006).

In most countries of the LAC region, the highest levels of HIV infection are found among men who have sex with men.² Sex between men has been estimated to account for 25–35% of reported AIDS cases in countries such as Argentina, Brazil, Guatemala, and Peru (UNAIDS/WHO, 2005). Female sex workers have the second highest HIV levels, with prevalence ranging from less than 1% in Nicaragua and 2% in Panama, to more

¹ The total number of people with curable STIs in the region is estimated at 38 million (WHO, 2001 a).

² In the LAC region, stigma surrounding sex between men remains pervasive. Furthermore, “machismo” culture and homophobia often prevent men from seeking HIV testing, counseling, and treatment. Discrimination is, therefore, a health-care concern.

than 10% in Honduras. In Honduras, one in 12 female sex workers and 8% of men who have sex with men have tested HIV-positive in Tegucigalpa (Proyecto Acción SIDA de Centroamérica, 2003). In Ecuador, sex workers had an HIV prevalence of 11%, against 0.3% among the general population (UNAIDS, 2004). In the Caribbean, the majority of HIV infection is occurring through sex between men and women³. Countries where this is the case tend to be characterised by a higher proportion of HIV cases among women (Hoffman et al., 2004).

AIDS impacts negatively on all the other MDGs (UNFPA, 2003 b). It affects poverty outcomes (MDG 1) and impairs universal access to education (MDG 2) – especially in countries with high prevalence rates. It also has forceful consequences on maternal and child health, since the HIV infection increases the frequency of obstetrical and neonatal problems.⁴ Therefore, while combating AIDS is a goal in itself, it underpins other development goals – as stated by former Secretary-General Kofi Annan, in his address to the General Assembly High Level Meeting on HIV/AIDS, in New York, on June 2nd, 2005:⁵

“In that mission, how we fare in the fight against AIDS is crucial. Halting the spread is not only a Millennium Development Goal in itself; it is a prerequisite for reaching most of the others. That is why the fight against AIDS may be the great challenge of our age and our generation. Only if we meet this challenge can we succeed in our other efforts to build a humane, healthy and equitable world.”

Discussion on the role played by population issues in the spread of HIV, treatment, and prevention will be oriented by the following schedule:

- 6.1. Gender aspects of HIV/AIDS
 - 6.1.1. The feminisation of the HIV/AIDS epidemic
 - 6.1.2. The nature of HIV risk factors in women
- 6.2. Integrating SRH and HIV/AIDS-related services
 - 6.2.1. Mother-to-child transmission (MTCT)
- 6.3. The need to focus on the youth
- 6.4. The link between migration and the spread of AIDS
 - 6.4.1. Disease transmission
 - 6.4.2. Hardships upon arrival
 - 6.4.3. Medical brain drain
- 6.5. A new Target under MDG 6: universal access to treatment for HIV/AIDS
 - 6.6.1. Malaria and RH
 - 6.6.2. Malaria and migration

³ In Puerto Rico, however, injecting drug use is the main source of the epidemic (UNAIDS/UNFPA/ UNIFEM, 2004).

⁴ A research by Leroy et al. (1998) in Kigali, Rwanda, showed that maternal HIV infection impacts on adverse obstetrical and neonatal outcomes: although there was no influence of HIV on congenital malformations and neonatal mortality, maternal HIV infection increased the risk of prematurity by 62%, the risk of LBW by 58%, induced a lower placental weight, and substantially increased the risk of maternal postpartum hemorrhage. UNFPA/WHO (2006) additionally underlines that pregnant women living with HIV/AIDS have an increased risk of developing malaria and its consequences and therefore require additional precautions.

⁵ http://data.unaids.org/Media/Speeches02/sp_annanga_02jun2005_en.pdf (last seen: March 2007).

The chapter opens with an overview of the feminisation of the HIV/AIDS epidemic in the LAC region by presenting recent facts and data from various countries and by describing some of the main gender related determinants that shape vulnerability. Factors analysed include: gender roles and sexual behaviour, reduced autonomy, violence against women, and the conditions of the sex market. Power dynamics have a profound effect on women's susceptibility to HIV.

Integrating SRH and STI-related services may optimise efforts in combating HIV/AIDS among female population. The text investigates the potential of associating these services for prevention, diagnosis, counselling, and treatment of HIV/AIDS and, for that, it identifies a number of studies related to the matter. Integration may also play a decisive role in reducing the number of infected children by promoting the prevention of mother-to-child transmission (MTCT).

Young people in developing and transition countries are more vulnerable than other age groups to HIV/AIDS. The chapter examines some of the causes that increase young people's susceptibility to the epidemic, such as: early sexual activity, inadequate information about HIV prevention, lack of sexuality and life skills education, and insufficient access to youth-friendly health services. Reviews of the evidence on strategies for preventing HIV among young people are presented.

In the last decade, the relation between HIV epidemiology and migration has been broadly documented. Migration impacts on HIV/AIDS spread through three intersecting paths: the first is the relationship between human mobility and disease transmission; the second relates to the conditions migrants arrive in the country or area of destination; and thirdly the impact of the flight of medical professionals on public health – the medical brain drain. Each one of these determinants is analysed in the text.

The new Target under MDG 6 underpins universal access to treatment for HIV/AIDS. Combined efforts by governments and public-private collaboration may contribute to technology transfer and to the expansion of treatment options for those already infected. Anti-retroviral therapy can prolong HIV patients' lives. Currently, the LAC region provides treatment to approximately 68% of its population in need.

Finally, the chapter describes the link between RH and malaria, as well as the effects of human migration on the reemergence of the malaria endemic in Latin America. Adequate understanding of the dynamics of migration is required for preventing spread of malaria to new areas. Also, since pregnant women and HIV infected people have reduced immunity to malaria, malaria control programmes must be designed to the needs of these groups.

6.1. Gender aspects of HIV/AIDS

In countries where HIV transmission occurs predominantly through heterosexual sex, as is now increasingly the case everywhere, women are more likely than men to be infected. Gender relations and gender inequalities play a major role in this context of the

spread of HIV/AIDS. Adequate understanding of gender-related determinants that shape vulnerability⁶ to HIV infection is, therefore, fundamental for addressing health care and treatment strategies.

Two aspects of this question need to be considered. On the one hand, as the percentage of women living with HIV is increasing among the total number of HIV/AIDS victims, actions focused on women as a part of SRH services become increasingly important. On the other hand, the mechanisms accounting for HIV infection among women involve specific gender problems and vulnerability that are different from those encountered among other groups.

6.1.1. The feminisation of the HIV/AIDS epidemic

The HIV/AIDS epidemic has increased rapidly in women worldwide, who now represent 48% of global infections. Women living with HIV account for 51% in the Caribbean and 36% in Latin America (UNAIDS, 2006 a). The highest proportions are found in Haiti (58%), Honduras (56%), and Guyana (55%) (see Table 6.1). In 2002, AIDS was the leading cause of death among women of childbearing age (15-45 years) in Belize (Belize, 2005). The feminisation of the infection is mentioned in almost all national MDGRs in the LAC region. The issue is receiving attention and most countries are adopting policies targeting the female population. The ICPD PoA has also made explicit the need for more effective policies with respect to HIV prevention and treatment, with special attention to girls and women.

In Argentina, as in other countries of the region, HIV initially circulated mainly among male injecting drug users and their sexual partners, as well as among men who have sex with men, but nowadays new infections are increasingly occurring during unprotected heterosexual intercourse. The male-to-female ratio among reported AIDS cases in the country shrank from 15:1 in 1988 to 3:1 in 2004 (UNAIDS/WHO, 2005). Similarly, in Belize this ratio has reached 1:1 (Belize, 2005), while in Trinidad and Tobago, females aged 15-19 were six times, and in Jamaica two-and-a-half times, more likely to be HIV infected, compared with males of the same age. In the Dominican Republic, women aged 20-24 are estimated to be twice as likely to be HIV-positive as young men (UNAIDS, 2006 a). According to the 2003 national MDGR of Honduras, since 1997 AIDS represents the second cause (after violence) for hospitalisation and death in the general population and the first cause of death among women of reproductive age. At the national level, the projected prevalence of HIV in the adult population is 1.4%, with an accumulated number of about 60,000 cases up to 2002. Germain and Kidwell (2005 b) hint that even in Brazil, where the epidemic has stabilised in the past several years, evidence is mounting that wives and primary female partners, as well as adolescent girls, are at increasing risk, as the number of

⁶ According to UNAIDS Inter-Agency Task Team on Gender and HIV/AIDS (2005: 8), HIV vulnerability refers to "the likelihood of being exposed to HIV infection because of a number of factors or determinants in the external environment, which are beyond the control of a person or particular social group". Sofia Gruskin (2002), on the other hand, describes it as "the lack of power of individuals and communities to minimize or modulate their risk".

cases in girls aged 13-19 in 2005 was 60% higher than in boys of the same age (*Boletim Epidemiológico AIDS*, Nov. 2006).

Table 6.1: Women as a percentage of adults living with HIV in countries of the LAC region (end of 2003)

Country	Adults (15-49)	Women (15-49)	Percentage
Argentina	120,000	24,000	20%
Bahamas	5,200	2,500	48%
Barbados	2,500	800	32%
Belize	3,500	1,300	37%
Brazil	650,000	240,000	37%
Chile	26,000	8,700	33%
Colombia	180,000	62,000	34%
Costa Rica	12,000	4,000	33%
Cuba	3,300	1,100	33%
Dominican Republic	85,000	23,000	27%
Ecuador	20,000	6,800	34%
El Salvador	28,000	9,600	34%
Guatemala	74,000	31,000	42%
Guyana	11,000	6,100	55%
Haiti	260,000	150,000	58%
Honduras	59,000	33,000	56%
Jamaica	21,000	10,000	48%
Mexico	160,000	53,000	33%
Nicaragua	6,200	2,100	34%
Panama	15,000	6,200	41%
Paraguay	15,000	3,900	26%
Peru	80,000	27,000	34%
Suriname	5,000	1,700	34%
Trinidad and Tobago	28,000	14,000	50%
Uruguay	5,800	1,900	33%
Venezuela	100,000	32,000	32%

Source: UNAIDS, 2004

6.1.2. The nature of HIV risk factors in women

The susceptibility of women to HIV infection is not unrelated to their general subordinate gender position in society. Over (1998), for example, found evidence, based on 32 countries in Sub-Saharan Africa, 20 in the LAC region, and 19 in Asia and the Middle East, that the urban adult HIV prevalence rate is statistically associated with gender-inequality indicators such as the gap between male and female literacy rates.

As Anderson et al. (2002) argue, whereas men have historically been at an increased behavioural risk, women are physiologically more vulnerable to HIV infection. They may also face an increased risk due to their subordinate gender status, e.g. with respect to access to information about prevention and the ability to negotiate safe sexual relations. Additionally, one may also cite realities such as: marriage of adolescent girls to older, sexually experienced men; husbands who engage in extramarital sex; violence and sexual coercion inside and outside marriage; and taboos against giving girls factual information about sexuality and

reproduction (Germain & Kidwell, 2005 a). In fact, gender inequalities and reduced autonomy have a profound effect on women's susceptibility to HIV. For women, fidelity offers little protection against HIV infection (UNAIDS/WHO, 2005). In Chinandegas, Nicaragua, for example, it is estimated that married women are twice as likely as sex workers to be living with HIV.

A study by Avila et al. (2002) examined the risk behaviour in 134 heterosexual HIV-seroprevalent maternity patients, 41 of their sexual partners (men who have sex with women), and 95 homosexual men (men who have sex with men) in Buenos Aires, Argentina. All study subjects were given referrals for post-test counselling, viral load, CD4 lymphocyte counts, and clinical care. The results indicate that most of the women had been infected by having sex with an already infected partner (84%), whereas most of the male partners had been infected via drug use (76%). Among the women, 16% had had sexual relationships with foreigners, whereas 34% of men had; most of these foreign contacts were from neighbouring countries, with very few contacts outside South America. More than 74% of women reported fewer than 5 partners during their lifetime, whereas 18% reported more than 10 lifetime partners.

“Underlying power dynamics between women and men in many developing countries also prevent women from accessing condoms and then insisting on their use. Unprotected sex with a non-monogamous husband greatly increases a woman's likelihood of being exposed to HIV. An important step in addressing such power dynamics is to ensure that there is universal access to sexual and reproductive health and rights, and that family planning services actively target men in their programs.” (UN Millennium Project, 2006: 11)

In Mexico City, Mexico, Pulerwitz et al. (2001) investigated the risk of HIV and other STIs among married and cohabiting women by estimating the prevalence of men's sexual behaviour outside of their primary relationships, based on data from the first population based household survey in Mexico that investigated male sexual behaviour. The analysis was restricted to sexually active married or cohabiting men (n = 3990). It was found that 15% of the men reported extra-relational sex during the past year, 9% reported condom use during last intercourse, and 80% perceived no HIV risk. Most secondary partners were co-workers, mistresses, or friends, and the number of extra-relational partners ranged from 1 to 30. Of the men who reported extra-relational sex, 89% indicated that their primary partner was unaware of their secondary partner, and one third reported that their secondary partner did not know about the primary. The authors concluded that a substantial number of women may be at risk.

Anderson et al. (2002) also emphasize the significance of gender-based violence in female disempowerment and in their increased susceptibility to HIV: it is essential that interventions involving women address partner violence and trafficking in women.

“Violence underpins the vulnerability of women and girls to HIV/AIDS. (...) It is likely that violence and the threat of violence contribute to the epidemic most powerfully

by restricting the freedom of women and girls to enter into and leave relationships, to choose when and how to have sex, to use condoms, and to benefit from prevention and treatment services.” (UN Millennium Project, 2005 c: 56)

A study by Kishor and Johnson (2004) uses household and individual level DHS to examine the prevalence and correlates of domestic violence and the health consequences of domestic violence for women. Nationally representative data from Cambodia, Colombia, Dominican Republic, Haiti, Peru, and Zambia were analysed. The results indicate that, in all countries, the prevalence of STIs among women who have experienced violence is higher than that among women who have not. In most countries, the self-reported prevalence of STIs among women who have experienced violence is at least twice that among women who have never experienced violence. Multivariate analysis of the data for three of these countries shows that even after controlling for relevant socioeconomic factors and other behaviours, violence is significantly and positively associated with the likelihood of reporting an STI or STI symptom. In the Dominican Republic, for instance, the proportion of women who had an STI 12 months prior to the survey was 3.7% among those who had ever suffered violence, 4.6% among those who experienced violence in the last year, and 1.0% among those who had never experienced violence.

Chacham et al. (2007) investigated the link between autonomy, or control over major domains of social and sexual life, and susceptibility to HIV infection among poor young women living in a slum area in Belo Horizonte, Brazil. A cross-sectional survey was carried out on a random sample of 356 young women aged 15-24. The findings suggest that indicators of autonomy that relate to sexuality, mobility and freedom from threat by partners were significantly correlated with practices linked to HIV prevention and with access to health services promoting prevention, especially among adolescents. Young women who talked to their partners about condom use before first intercourse and co-decided with them on condom use were more likely to use condoms. In contrast, those who had ever been victim of physical violence by a partner or whose partners restricted their mobility were less likely to use condoms.

Gender-based violence limits the physical and mental freedom – which is accentuated in the context of the growing trafficking industry. People trafficked into any form of exploitation are all vulnerable to mental, reproductive, sexual and communicable disease health risks. Globally, Colombia is the third most common country of origin for trafficked women; it is estimated that each year, 35,000 women leave Colombia to work in the sex market in Asia and Europe (Ward, 2002).

“The trafficking of girls and women as sex workers places them at increased risk of HIV infection and other STIs. In addition to implicit risks related to forced, often unprotected sex by multiple partners, most trafficked women and girls and sex workers enter countries and work illegally, are usually afforded no protection by the law, and have little near or no access to social and medical services. Migrant women are also subject to these situations of risk.” (PAHO/UNIFEM, 2005: 2)

Several studies⁷, similar to those above described and related to other developing regions, also point to a strong correlation between gender-based violence and susceptibility to HIV.

In order to prevent HIV infections that may occur in forced sexual intercourse and other gender-based violence, post-exposure prophylaxis (PEP) – an anti-retroviral treatment used shortly after a person has been exposed to HIV in order to inhibit infection – has been proven effective if started promptly, preferably within the first several hours after exposure. A study conducted since PEP has been offered in a clinic in São Paulo, Brazil, showed that none of 182 women treated with PEP became infected, while four of 145 (2.7%) without PEP did acquire HIV (Drezett, 2000). Nevertheless, the stigma of violence and the shame associated with sexual abuse makes it difficult for women to seek help and treatments designed to reduce the possibility of infection.

Providing women with female-controlled HIV prevention methods may greatly enhance their effectiveness. As stated by former UN Secretary-General Kofi Annan, at the XV International AIDS Conference, in Bangkok, Thailand, on July 11th, 2004:⁸

“We must ensure they [women] have full access to the practical options that can protect them from HIV - including microbicides, as they become available.”

In the LAC region, HIV transmission between female sex workers and their clients is a significant factor in the spread of HIV. As was mentioned before, the second highest HIV levels in the LAC region are found among female sex workers. Special policies must be designed for this group. Stigmatisation and the often illegal nature of sex work prevent sex-workers from seeking protection from abusive clients or bar and brothel owners. The absence of regulation of the sex industry, and the fact that in most countries sex work is illegal and therefore not covered by the protection of legal safety standards has resulted in a lack of response from the health sector, police and social services to sex workers' concerns (Anderson et al., 2002). These issues were the object of the discussion at the Global Technical Consultation on HIV and Sex Work in Rio de Janeiro, in July, 2006. Jenny Butler, of UNFPA, during her presentation in this consultation, made reference to the priority pillar of support to the scaling up of HIV, SRH, and other health and social services for this group, and to the need to address barriers to access in the sex work context. Globally, only

⁷ In a multivariate logistic regression based on 1366 women aged 16-44 seeking antenatal care at clinics in Soweto, South Africa, in 2001-2002 (Dunkle et al., 2004), 55% reported that they had experienced physical or sexual abuse by a male partner. Several measures of intimate partner violence predicted HIV infection (odds ratio of 1.5). Reporting a large power disparity in the current sexual relationship and having participated in any of the sexual risk behaviours examined, except never having used a condom, were also associated with an increased likelihood of HIV infection. All of the risk behaviours – including never having used a condom – were linked to various forms of intimate partner violence, child abuse and power disparities in women's current relationships. The researchers suggest that because abused and disempowered women have an increased risk of HIV infection even after their own risk behaviour is considered, abusive and controlling men may be more likely than other men to be infected with HIV or with other STIs that can increase women's susceptibility to HIV. They conclude that “addressing problems of gender-based violence and HIV will require broad community and societal level transformations that challenge entrenched cultures of violence and male-dominated norms of gender relations.” In an accompanying commentary Martin and Curtis (2004) point out that many major initiatives to stem the spread of HIV/AIDS – including the US President's Emergency Plan for AIDS Relief – acknowledge the importance of addressing gender inequities, intimate partner violence and resultant challenges to HIV prevention. However, they note that many implementation strategies, such as those that focus on abstinence among young people, do not account for the circumstances and effects of gender-based violence and may be of limited use to women who have been abused or disempowered.

⁸ <http://www.un.org/News/press/docs/2004/sgsm662004.htm> (last seen: March 2007).

26% of sex workers, according to her data, are estimated to have access to such services. Established health and social services are often reluctant to address their needs, and where these services are offered, their quality is often poor.

Montano et al. (2005) interviewed and tested 13,600 female commercial sex workers in 9 countries of South America, between 1995 and 2002. Pre- and post-test counselling as well as subsequent referral to appropriate medical authorities was provided; country-specific questionnaires were developed and administered in face-to-face interviews. Among female commercial sex workers, HIV prevalence increased with age ($P < 0.05$) and higher prevalences were noted in the cities of Buenos Aires (6.3%), Asunción and border cities with Brazil (2.6%), and Guayaquil (2.1%). Several risk factors were associated with HIV infection among sex workers. Most notable in analysis were the associations with a preceding STI history, number of sexual partners per week, injected and non-injected drug use, alcohol use, and blood transfusions. Researchers were unable to evaluate the association between HIV seropositivity and condom use given a high number of nonresponses to this type of question when country-specific analysis was performed.

Allen et al. (2006) conducted a similar cross-sectional study in Georgetown, Guyana. The objective was to identify risk factors for HIV and STI service use patterns among 299 female sex workers. It was found that HIV prevalence was 30.6% [95% confidence interval (24.9-36.3)]. Multivariate logistic regression⁹ indicated a significant association between HIV infection and having a vaginal ulcer in the last 12 months. Also, having had a vaginal ulcer was associated with use of cocaine. Regression on STI service-use variables found significant associations between HIV infection and getting condoms from public sector STI services, not going back for HIV test results, and last getting tested for HIV more than 6 months ago. The authors advocated that an active programme of screening and treatment of ulcerative STIs should be combined with substance abuse services for sex workers. They observe as well that HIV stigma may prevent sex workers at high risk from accessing HIV test results.

A first step towards the improvement of this situation would be to recognise that women are vulnerable to infection, and that all women have the right to have access to confidential, voluntary counselling and testing treatment, care and support (International Women's Health Coalition, 2006; UNAIDS, 2006 b). Programmes and general health policies need to incorporate a gender perspective into HIV/AIDS agenda, since gender norms and roles also have a profound effect on transmission/prevention of the epidemic. These policies should target groups with higher vulnerability to HIV infection and they must promote ways for women to protect themselves more effectively.

“Sexual and reproductive rights are a pivotal neglected priority in HIV/AIDS policy, programming and resource allocation. Failure to protect the human rights of girls and

⁹ Logistic regression is a type of regression that relates the probability of experiencing a certain event to a set of explanatory variables. This is different from conventional regression in that the variable to be explained is a probability and therefore constrained to the interval from 0 to 1.

women, including their right to health and their right to live free of sexual coercion and violence, fuels the pandemic. Universal access to sexual and reproductive health services and education, and protection of sexual and reproductive rights, are essential to ending it.” (International Women’s Health Coalition, 2006: 1)

More in general, the World Bank (2004 d) categorises the appropriate interventions to address female vulnerabilities and risk factors as follows:

1. Reducing poverty and economic dependency;
2. Addressing the negative effects of cultural norms;
3. Changing sexual norms;
4. Reducing violence against women;
5. Improving laws, law enforcement, and legal access;
6. Addressing physiological factors; and
7. Ending female genital mutilation.

6.2. Integrating SRH and HIV/AIDS-related services¹⁰

As the proportion of women among the population living with AIDS is increasing, synergies between the SRH and STI fields become increasingly evident. The fact that about 80% of HIV infections are now transmitted sexually – and a further 10% perinatally or during breastfeeding (Askew & Berer, 2003) – would seem to reserve a major role for SRH interventions in AIDS prevention. A key issue of the Cairo Agenda is the integration of the management of STIs, including HIV, with maternal and child-health and family-planning services. The ICPD+5 Agenda is even more emphatic in such concerns and it sets the following target:

“By 2005, 60% of primary health care and family planning facilities should offer prevention and management of reproductive tract infections, including STDs and barrier methods to prevent infection.” (ICPD+5, 21st Special Session, Agenda item 8)

The 2006 Review of the UN General Assembly Special Session on HIV/AIDS (UNGASS) also noted the importance of linking HIV/AIDS and SRH. Based on the Political Declaration and the outcomes of the 2005 World Summit, the UNAIDS Secretariat and its partners have been defining the concept in a framework for *Universal Access to HIV/AIDS Prevention, Treatment and Care by 2010*, which also underlines the importance of strengthened linkages between SRH and HIV/AIDS. Although national MDGRs are almost entirely silent on the value of integrating services, Latin American countries had generally progressed further

¹⁰ In order to offer guidance on how to link SRH and HIV/AIDS, IPPF, UNFPA, WHO and partners have prepared a set of tools which include:

- Sexual and Reproductive Health and HIV/AIDS: a framework for priority linkages: http://www.who.int/reproductive-health/stis/docs/framework_priority_linkages.pdf
- Linking Sexual and Reproductive Health and HIV/AIDS: an annotated inventory: http://www.who.int/reproductive-health/stis/docs/inventory_linkages_srh_hiv.pdf
- Sexual and Reproductive Health of Women Living with HIV/AIDS (UNFPA/WHO, 2006): http://www.unfpa.org/upload/lib_pub_file/616_filename_srh_hiv-aids.pdf

than other developing regions, including Sub-Saharan Africa, in implementing integration – especially counselling and risk reduction (Lush, 2002; Dehne & Snow 1999).

“HIV/AIDS programs have in the past been separated from SRH programs, but it is time to reintegrate these two obviously interlinked health issues in order to optimize positive health outcomes.” (UN Millennium Project, 2006: 117)

Family-planning and maternal and child-health services may be ideal settings for providing information and for counselling about appropriate prevention behaviour, contraceptive development, and condom use – which provide an excellent barrier against gonorrhoea, chlamydia, cytomegalovirus, herpes, hepatitis B, and HIV infection (Erny & Porte, 1989; Berer, 2004). Access to SRH and rights also plays a role in preventing mother-to-child transmission of HIV. The great potential of these services in combating HIV/AIDS is linked to the fact that they often are a woman’s primary, and sometimes sole, contact with the health-care system (Budiharsana, 2002).

“The reach and large clientele of reproductive health services offers an important opportunity for AIDS prevention and treatment. Married women and some youth who are reached by existing family planning, pregnancy, and delivery services, and RTI/STI services including cervical cancer and breast cancer screening, offer a huge potential clientele for VCT, PMTC, AIDS education, and condom promotion and distribution, as well as AIDS care and treatment.” (Kaufman & Messersmith, 2005: 14)

Prevention and management of STIs, and their early detection and treatment, are important not only in themselves, but also for HIV prevention – since some STIs increase the likelihood of HIV transmission during unprotected sex (UNAIDS, 2005 c). Therefore, comprehensive, confidential, and effective prevention, diagnosis, examination, and treatment for STIs should be available in maternal and child-health, antenatal care, and family-planning services (WHO/Global Programme on AIDS, 1994; Mayhew et al., 2000). In fact, it has been estimated (UNAIDS/UNFPA/UNIFEM, 2004) that access to basic prevention services could prevent 29 of the 45 million infections projected to occur during the present decade.

“The great majority of HIV infections are transmitted sexually or during pregnancy, childbirth, or breastfeeding. The prevention, diagnosis, and treatment of sexually transmitted infections is a core reproductive health concern as well as important HIV prevention intervention. Moreover, family planning programs have developed considerable knowledge and tools for conveying information and influencing sexual behaviour. Thus there are abundant reasons to foster strong links between reproductive health and HIV/AIDS programs and services.” (UN Millennium Project, 2005 c: 36)

In Haiti, e.g. where the great majority of HIV infections are contracted sexually, the NGO GHESKIO decided to offer SRH services linked to their HIV/AIDS programme. Integration was implemented mainly because stigma and lack of necessary professional skills resulted in many HIV-positive people being denied SRH services elsewhere, and also because people did not have time or money to go from one place to another to meet their

varied health needs. Providing the opportunity to access other health services at the same time and under the same roof greatly enhanced the up-take of HIV testing and counselling (Simone, Pape & Verdier, 1999). Indeed, according to these authors, SRH can contribute in many different ways:

Contribution of family-planning services:

- Education on STIs, their symptoms and transmission and appropriate health-seeking behaviour; detecting and managing STIs;
- Encouraging the use of condoms with or without other contraceptive methods for protection against unwanted pregnancy, STIs/HIV, and infertility;
- Providing information that non-barrier contraceptives do not protect against STIs/HIV;
- Ensuring that HIV-positive women and men have access to SRH services to prevent unwanted pregnancies or to conceive and have children safely.

Contribution of antenatal and delivery services:

- Information and services to prevent sexual transmission of HIV;
- HIV testing and counselling;
- Education on risk reduction;
- 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;
- Detection and management of STIs, including syphilis.
- Prevention of mother-to-child transmission of HIV at delivery/through infant feeding.

There is a clear association between women's knowledge of SRH issues and their knowledge of HIV/AIDS, suggesting that there are advantages to joint information strategies for both – although it is not possible to attribute any causal interpretation to this relationship. The 2003 DHS of Bolivia, for instance, shows that 68.5% of women of reproductive age knew that an apparently healthy person can still be infected with AIDS. However, among women who knew less than 4 contraceptive methods, only 34.9% answered the question correctly. Among those who knew 4-7 methods, the proportion was 56.2%, and among those who knew 8-11 methods 74.5%. Of the women who identified 12 or more contraceptive methods, 89.4% also gave the correct answer to the HIV/AIDS question.

Besides the contribution for improving awareness and knowledge about HIV/AIDS, integration has also been considered an important means for promoting voluntary counselling and testing (VCT) and condom use. Low proportions of persons who know their sero-status have been observed in Brazil (Beloqui, 2004), and a similar situation may be found in other countries in the region.

A wide acceptance of HIV VCT in pregnant women attending SRH services has been reported. Viani et al. (2006), for example, conducted a study in Baja California, Mexico,

among pregnant women attending the Tijuana General Hospital from March to November 2003. Of the 1,653 women who sought prenatal care, 1,529 (92.5%) consented to participate, as did 1,068 (95.2%) of 1,122 women in labour.

Feasibility and effective synergy of integrating services: the case of Haiti

A research in Port au Prince, Haiti, by Peck et al. (2003), demonstrates the feasibility and effective synergy of integrating on-site primary care services into HIV VCT, through a retrospective review of patient records at the GHESKIO VCT centre. The number of new people seeking voluntary counselling and testing at GHESKIO increased from 142 in 1985 to 8,175 in 1999, with an increasing percentage of women, adolescents, symptom-free clients, and self-referred clients. Of new adults seeking VCT in 1999, the centre was able to provide AIDS care to 17%, tuberculosis treatment to 6%, STI management to 18%, and family planning to 19%.

Acceptance of integrating VCT and care services has been found not only in Latin America, but also in other developing countries.¹¹

Routine offer of voluntary and confidential HIV testing in SRH services must be implemented, particularly at STI and tuberculosis clinics, at antenatal clinics providing prevention of mother-to-child transmission. Testing is crucial for both prevention and treatment; post-test counselling is also an imperative issue:

“A central element of a public health response would be a greatly increased testing program and a recognition that testing serves a variety of purposes, calling for a variety of approaches. Traditional voluntary counseling and testing, initiated by people wanting to know their status, should be made far more available.” (UN Millennium Project, 2005 c: 66)

With respect to female condoms, SRH services and programmes also play a role in encouraging their use. The female condom has no serious side effects: it does not alter the vaginal flora or cause significant skin irritation, allergic reactions or vaginal trauma (Gollub & Warren, 1997). It protects not only against HIV, but also against the cytomegalovirus, herpes virus, and hepatitis B virus (Hoffman et al., 2004). Providers need training, including awareness of the special counselling needs of potential clients (Gollub & Warren, 1997). Particularly, female condoms may offer sex workers greater control over HIV prevention if clients find them more acceptable than male condoms (UNFPA/WHO/PATH, 2005).

¹¹ Reynolds et al. (2003) conducted a study about VCT, in Kenya, during June 2002. Both qualitative and quantitative methods were employed in 20 VCT centres. With respect to the acceptability of integrating services, results indicated that: all in-charges and VCT counselors agreed that it was a good idea to provide information and education on contraception to VCT clients. Almost all providers and in-charges (95%) supported provision of information-education and communication materials and referral for family-planning services during VCT. Provision of contraceptive methods was supported by almost two-thirds of in-charges and counselors (60% and 61%). Most clients (89%) thought family-planning services in VCT was a good idea. Most in-charges and counselors thought that the pre-test session or the post-test session was the most appropriate time to offer these services. Clients preferred that family-planning counseling follow the HIV test.

“With the recognition that gender-based inequalities are a major force driving the epidemic, the development of prevention methods over which women have some control became an imperative.” (Hoffman et al., 2004: 140)

Even though using female condoms requires the cooperation of male partners (Hoffman et al., 2004), which is not guaranteed, successes with its introduction have been registered and their use is increasing. In Haiti, female condom sales (Reyalite) increased from 14,073 in 1997 to 37,854 in 2000 (Camara, 2002). The Ministry of Health in Brazil conducted a study to identify the acceptability of the female condom. Over the period of a year, 2,400 women who used public-health services from varying cultural backgrounds were interviewed. The results indicated an acceptability rate for female condom of 70%. In 1999, the National AIDS Programme (NAP) began distributing it in the public sector. Key messages focused on gender inequalities and cultural factors. Similarly, research in six Brazilian cities (Barbosa, Berquó & Kalckmann, 2000) indicated that a relatively high percentage (70.1%) of 90 day users found the method acceptable. This percentage varied relatively little among user groups, although it was slightly higher among women who were accustomed to the male condom or who had a history of STI and slightly lower among those who did not consider themselves at any risk of pregnancy.

Integrating services may also contribute to widening the practice of dual protection, by signaling that the risk of STIs should be considered in contraceptive choice. A study conducted by Lazcano-Ponce et al. (2000), which involved 2,107 clients in a family-planning clinic in Mexico City, suggests that if women seeking family-planning services are informed about family-planning methods and STI risk factors and prevention, and are then given the responsibility of choosing a method, they are more likely than women whose method choice is based on the provider selection to choose the condom rather than the IUD. These data indicate that providing information about family-planning methods, STI risk factors, and choice of contraceptive method to family-planning clients may reduce the potentially harmful reliance on IUDs as the only contraceptive method and increase the selection of condoms for contraception in clinics providing these services. The results also point to the argument that physicians’ “perception” of women’s STI risk may place women at greater risk of exclusive reliance on the IUD than women’s informed choice.

Xu et al. (2002) developed a study which objective was to evaluate the effects of counselling women on partner communication, partner HIV testing, and condom use by steady partners in Northern Thailand. The cohort consisted of 779 women, of whom 655 were recruited from family-planning clinics and 124 from the postpartum ward at Chiang Rai Hospital. Information about HIV prevention behaviour was collected and followed up at 6 and 12 months to determine if this behaviour changed after clinic-based counselling. The findings indicated that counselling did promote communication with husbands concerning HIV risk and preventive behaviour, and this communication was associated with adapting preventive behaviour, such as initiating condom use and HIV testing on the part of the husband. The effects of clinic-based counselling on consistent condom use and HIV testing

of husbands were small or moderate. It was noted that many couples used a few condoms that were given to the women at clinic visits and then stopped; this finding indicated that, although many couples could sustain condom use for a while after counselling, they were not sufficiently motivated to overcome the barriers against condom use, which may include the modest cost of condoms, stigmatisation for a married person buying condoms in small communities, implications of lack of trust in the partnership, inconvenience of using condoms, perceived low risk of infection, limited reliability of condoms, and decrease in sexual pleasure with condom use.

SRH services may contribute to the prevention and treatment of opportunistic infections to which HIV-infected women, with their weakened immune systems, are more vulnerable. The most common in people living with HIV/AIDS include: candidiasis, cervical dysplasia, cytomegalovirus, herpes simplex viruses, and human papilloma virus (HPV) (Tuomala, 1999; Fauci, 2004). It is crucial that countries offer full access to normal channels for gynaecological and RH services, such as gynaecological, contraceptive, or pregnancy-related care to women living with AIDS (Dalcy, 1994).

People living with AIDS who have access to anti-retroviral therapy are living longer and must also have access to comprehensive SRH programmes in order to enjoy the right to healthy, safe, and pleasurable sexuality, the right to informed reproductive choice, and the means to have children without transmitting the virus (Kaufman & Messersmith, 2005; Rutenberg & Baek, 2005). Programmes and policies must be adapted to meet the growing SRH needs and rights of people living with AIDS. Preventing unwanted pregnancies is a crucial issue; also, a significant proportion of the HIV-positive women may wish to become pregnant (UNFPA/WHO, 2006).

“Voluntary contraceptive services to help HIV-positive women prevent unwanted pregnancies should be a central component of cost-effective national prevention strategies.” (UN Millennium Project, 2006: 12)

“The AIDS field itself is changing as treatment access begins to become the reality, or at least the stated objective, even in the poorest places. With treatment, AIDS can become a chronic disease. As people live with the disease, the field must recognize that the predominantly young populations affected will want to pursue healthy and active sex lives, marry, and have children. The field must move beyond merely preventing primary infections.” (Kaufman & Messersmith, 2005: 8)

Other programmes must include the need to treat male partners who are much less likely to be the primary users of SRH services. In addition, targeting stigmatised segments of the population, such as men who have sex with men, also requires extra efforts (Finger, 1994; UNAIDS/WHO, 2005).

“Lack of information, stigmatization, homophobia, and social prejudices regarding sexual orientation or behaviour prevent access to prevention and clinical care in Latin America. These are some of the obstacles that people at high-risk or who are infected face when trying to access services. These also hinder access of people living with HIV

and AIDS (PLWHA), which impedes fair and equitable treatment.” (Abreu, Noguer & Cowgill, 2003: xxiii)

In practice, the integration of SRH with HIV prevention has not been easy, and ties between the two kinds of programmes have generally been weak (UN Millennium Project, 2005 c). Packer et al. (2004) analysed Jamaica's public health system and proposed a number of potential interventions that could enhance the integration of family-planning (FP) and HIV services, such as: adapting human resource policies, using a common checklist for FP/antenatal/STI, redesigning record-keeping systems, and implementing new staff training. The study concluded that, without the establishment of systemic changes in the health system, effective integration is highly unlikely.

According to Askew and Berer (2003), the following problems play a role in this lack of articulation: leaders in both fields have different agendas and entrenched disciplines; bilateral and multilateral donors have separate departments for HIV/AIDS and for SRH, and have been funding programmes and services separately; responsibility for programmes, budgeting and funding for the two specialities are separate in national health systems; vertical programme structures have been initiated or maintained; the remit of the Global Fund to Fight AIDS, TB and Malaria has exacerbated this situation because AIDS funds have become so abundant that they tend to favour a vertical approach over efforts at integration with SRH and other related health areas.

In terms of the assignment of resources, there has even been some competition between SRH and HIV/AIDS programmes. Campbell-White, Merrick & Yazbeck (2006) point out that while investments in family planning and SRH declined in real terms between 1995 and 2001, support for HIV and STIs rose eightfold. From a more practical viewpoint, combining SRH and HIV services requires special efforts to ensure that the integration does not overburden existing services and compromises the quality of services. The initial costs of integration, including staff training to meet the complex SRH needs of HIV-positive clients, also tend to be high.

On June 7th, 2004, UNFPA and UNAIDS, in collaboration with Family Care International, convened a high-level global consultation at the Rockefeller Foundation in New York. Participants, including ministers, parliamentarians, ambassadors, leaders of UN and other multilateral agencies, donor organisation officials, community and nongovernmental organisation leaders, young people, and people living with HIV, expressed

“(...) profound concern that far too many policies, programmes and initiatives addressing either sexual and reproductive health or HIV/AIDS have failed to take account of these linkages; and that as a result, the global community has thus been less effective than it could have been in responding to these shared challenges and opportunities”.

Consequently, they recommended transforming existing SRH and HIV/AIDS policies and services. Recognising that the current evidence base regarding these issues is scarce, UNFPA recently contracted the services of the Cochrane Collaboration to produce more

systematic empirical evidence by carrying out a systematic review of structural, policy and programmatic linkages between SRH and HIV/AIDS.¹²

6.2.1. Mother-to-child transmission

Mother-to-child transmission (MTCT) occurs during pregnancy, while nursing and through prolonged breastfeeding. It has been estimated that, in the absence of any intervention, rates of MTCT of HIV can vary from 15-30% without breastfeeding, and can reach 30-45% with breastfeeding (WHO, 2004 b). HIV-infected infants rarely live beyond age two (UNFPA, 2003 b). In the LAC region, around 32,000 children under the age of 15 were living with HIV in 2005 and AIDS claimed some 59,000 lives in this age group (UNAIDS, 2005 a). In the Caribbean, approximately 3,000 children are born annually to mothers living with HIV. As the number of HIV-infected women increases, so does the number of HIV infected children (Camara, 2002). Belize's MDGR (2005) underlined the need to improve strategies for the prevention of MTCT:

“Mother-to-child transmission (MTCT) of the virus is the most significant source of infection in children below the age of 10 years, who account for 6% of all HIV cases and 4% of AIDS cases. Therefore, strategies to prevent and/or mitigate MTCT have become essential.” (Belize, 2005: 23)

Table 6.2: Central America: Proportion of HIV-infected pregnant women in selected countries

Country	Estimated prevalence among pregnant women
El Salvador	1% main maternity hospital (2000)
Guatemala	0.75% Guatemala City (2000) 0.36% national average, 11 sites (2000)
Honduras	1.9% San Pedro Sula (1999) 1.5% Puerto Cortes (1999) 0.8% Tegucigalpa (1999)
Panama	0.9% Panama West (1997)

Source: Mordt et al. (2003)

Women's lack of access to health care and information leads to an increase in the number of infected women and children (Anderson et al., 2002). Less than 8% of pregnant women in the world are currently offered services to prevent MTCT (UNAIDS, 2006 a). However, in Argentina, 87% of pregnant women receive treatment to this end. Cuba's prevention of mother-to-child transmission programme is among the most effective worldwide: all

¹² The specific issues to be considered are:

- Access to and uptake of key HIV/AIDS and SRH services;
- Access of people living with HIV to SRH services tailored to their needs;
- Coverage in SRH services of all populations, also addressing underserved and marginalized populations, such as injecting drug users, sex workers, and men;
- Support for dual protection against unintended pregnancy and STIs including HIV for those in need, especially young people;
- HIV/AIDS related stigma and discrimination;
- Quality of care in SRH or HIV service delivery;
- Cost effectiveness and efficiency of linkage between services.

pregnant women are tested for HIV, and there is universal and free access to anti-retroviral therapy (UNAIDS, 2005 b).

“MTCT-prevention interventions should not stand in isolation, but be integrated where possible into existing health care infrastructures and reproductive health services. Moreover, the interventions should be seen as part of a wider response to HIV/AIDS, which includes expanding access to care and support for HIV infected mothers and their families, including treatment of opportunistic infections and accelerating access to HIV treatment.” (WHO, 2001 b: 7)

MTCT can be reduced significantly through the use of anti-retrovirals by women living with HIV during pregnancy and delivery, and by recently born infants. ARV prophylaxis alone reduces by 30-50% the rate of peripartum transmission (WHO, 2004 b). According to the National Institute of Allergy and Infectious Disease (2005), in case health-care providers treat pregnant women who live with HIV and deliver their babies by elective caesarean section, performed before the onset of labour and before rupture of membranes, the chances of the baby being infected are reduced to 1%: HIV infection of newborns has been almost eradicated in the US due to adequate treatment.

Comprehensive postpartum follow-up and care for women living with HIV/AIDS and their infants extends beyond the six-week postpartum period and includes assessment of maternal healing after delivery and the evaluation for postpartum infectious complications (UNFPA/WHO, 2006). Additionally, counselling about the vulnerability related to breastfeeding and provision of substitutes for breast milk should be a regular part of HIV counselling in SRH services, to avoid harmful nutritional consequences (Anderson et al., 2002). Those actions are essential for promoting maternal health and for guaranteeing the survival of children born to women living with HIV/AIDS:

“A large proportion of HIV-infected women do not yet have access to comprehensive prenatal, obstetrical and postnatal care and require specific and innovative strategies for MTCT prevention. (...) A comprehensive and integrated approach to prevent HIV infection in women, infants and young children is urgently required.” (WHO, 2004 b: 2)

“Many of these [mother-to-child] infections could have been avoided by ensuring mothers’ access to a regimen to prevent mother-to-child transmission. Expanded SRH services can provide an integrated package of services including counseling on HIV transmission and prevention, psychological and social support, and anti-retroviral treatment for HIV-positive mothers.” (UN Millennium Project, 2006: 12)

A study by Stover et al. (2003) based on data from 14 high prevalence countries provides estimates on the possible synergies between family planning and conventional MTCT prevention programmes. According to this study, the cost per child death averted could be reduced from US\$ 2600 under conventional MTCT strategies to a mere US\$ 360 if a family-planning component were added. The cost per averted infection would fall from US\$ 1300 to US\$ 660. It is estimated that in Sub-Saharan Africa family-planning services

are preventing HIV infection in more infants than the provision of nevirapine (Reynolds, Steiner & Cates, 2005) and are more cost-effective for this purpose (Reynolds, Janowitz, Homan & Johnson, 2006).

Benefits identified in MTCT prevention programmes: the example of the Dominican Republic

Perez-Then et al. (2003) documented the first-year results of the Dominican Republic's programme to prevent MTCT, which started in 2000. During the first year, 42,666 women attended prenatal care; 54% (23,067) of the women took an HIV test; of those, 581 (2.5%) had HIV. Specific benefits were identified, such as the administration of anti-retroviral treatment to 89% (164/185) of the mothers and 98% (183/186) of the children. Caesarean section was performed in 67% (124/185) of the HIV-positive pregnant women, and the infant formula was dispensed to 47% (87/186) of all cases. An integrated package of interventions to reduce MTCT was broadly implemented. Based on the project evaluation, the authors estimated that implementation of the MTCT national programme could reduce the average risk for MTCT by 50%, preventing approximately 1,000 infant HIV infections each year in the country.

Counselling and voluntary tests for pregnant women must be available in health services. Rosa et al. (2006) indicate that counselling and HIV testing has been successfully implemented in the public-health sector in Brazil. A cross-sectional study was carried out in Porto Alegre, Brazil, from December 2000 to February 2001. From a total of 1,642 mothers interviewed, 94.3% reported being offered HIV testing before or during pregnancy or during labour. Attending fewer than six prenatal visits, being single, and age under 18 years were relevant barriers preventing HIV testing.

Even though testing is a crucial issue, it should not occur without consent since a rights-based and comprehensive approach on testing must be promoted:

"In some cases, pregnant women are tested for HIV without their knowledge and consent. While usually this testing is done to provide the best care and treatment available, in some cases, particularly in contexts where care, support, and treatment for HIV-positive people has not yet been integrated into health care systems, testing is sometimes performed so that health care workers can take adequate measures to protect themselves from infection. (...) The SRH field's emphasis on informed choice of contraceptives and informed consent for contraceptive procedures could serve as a model for guiding testing programs for pregnant women." (Kaufman & Messersmith, 2005: 21)

Furthermore, Kaufman and Messersmith (2005) denounce that not only testing without consent has been documented, but also other rights abuses including coerced abortion and sterilisation (e.g. in Peru) in women living with HIV. Health workers must be aware of the need for comprehensive care and be fully informed with accurate description of risks, appropriate

protection measures, and universal precautions – which in turn could reduce discrimination that people living with HIV/AIDS face in tertiary care units (Mordt et al., 2003).

“Many people living with HIV/AIDS express widespread dissatisfaction with the health care systems, in which they often experience rejection by health care workers, lack of appropriate care, and violations of confidentiality. Health care workers’ fear of contamination of diagnostic instruments often leads to delayed attention or to none at all.” (Mordt et al., 2003: 13)

In their study on Brazil, EngenderHealth and UNFPA (2006) found frequent complaints about the discrimination and stigma that HIV-positive women face in general RH centres. Long waiting times, geographic distance to facilities offering care, and provider attitudes and discrimination were among the major concerns cited by women. Some reported that, while they knew that they had the right to be served first, they often failed to identify themselves out of concerns about treatment received and about confidentiality. In Haiti, an NGO (GHESKIO) sponsored by UNFPA found that HIV-positive women referred to family-planning clinics were being turned away because of stigma and discrimination, as well as lack of competence to meet their special needs. Family-planning clinics often refused to take referrals from HIV clinics, fearing that the stigma of AIDS would affect their business.

6.3. The need to focus on youth

People aged 15-24 years account for half of all new HIV infections worldwide (UNAIDS, 2006 a), and it has been estimated that 11.8 million young people in 2001 are HIV positive. Young people the LAC region are also more vulnerable than other age groups to HIV/AIDS. The growth of the epidemic in this age group is related, among other causes, to increase in risk-taking activities, to the social stigma associated to the HIV infection, to the lack of access to preventive sexual and reproductive health services, to difficulties in obtaining information (both in and out of school), and to insufficient health policies designed to the needs of the youth. Young people are therefore very susceptible to the infection:

“The epidemic varies greatly in different regions of the world, but in each of these epidemics young people are at the centre, both in terms of new infections as well as being the greatest potential force for change if they can be reached with the right interventions.” (Monasch & Mahy, 2006: 15).

As ICPD emphasizes, policies must be oriented to the need of access to information and education for young men and women. MDG indicator 19b – percentage of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS – is in line with this recommendation. The indicator is defined as the percentage of population aged 15-24 who correctly identify the two major ways of preventing the sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), who reject the two most common local misconceptions about HIV transmission, and who know that a healthy-looking person can transmit HIV.

“By 2005 at least 90% of young men and women, aged 15-24, should have access to the information, education and services necessary to develop the life skills required to reduce their vulnerability to HIV infection.” (ICPD+5, 21st Special Session, Agenda item 8)

“Programmes should include support mechanisms for the education and counseling of adolescents in the areas of gender relations and equality, violence against adolescents, responsible sexual behaviour, responsible family planning practice, family life, reproductive health, sexually transmitted diseases, HIV infection and AIDS prevention.” (ICPD §7.47)

Programmes must consider that more young people are having sex at earlier ages and with more partners. There is a relationship between the two, in the sense that young people who initiate their sexual activity at an early age are more likely to have sex with high risk or multiple partners and are also less likely to use condoms (Monasch & Mahy, 2006). It has been widely denounced that policies targeting young people often fail to acknowledge early sexual activity. In a survey in Brazil, for example, at least one in three (36%) people aged 15-24 said they were sexually active before their 15th birthday, 20% said they had had sex with more than ten partners thus far in their lives, and 7% had had sex with more than five partners in the previous year (UNAIDS/WHO, 2005). Yet knowledge of HIV was poor.

In the Caribbean, a sexual health survey among students in St Maarten, in 2001, interviewed 1,200 high school students (13-18 years old) and the results indicated that 42% were sexually active; 60% reported having used condom at last sexual intercourse, and 18% had four or more life time sex partners (Camara, 2002). In another survey in Barbados, fully one quarter of women aged 15-29 said they had been sexually active by the time they turned 15 (UNAIDS, 2005 b). In the GHESKIO project in Haiti, it was found that the great majority of young people attending the HIV clinic had multiple sex partners; in the case of young girls, these sex partners were often much older. Around 44% of young women always had sex without condom, compared to 19% of the boys. Among young men in Peru who identified themselves as homosexual, 40% reported having recently engaged in unprotected anal intercourse (UNICEF/UNAIDS/WHO, 2002).

The *Adolescent Condom Survey* in Jamaica (Hope Enterprises, 2001) stated that more than 1,000 adolescents, 73.7% of 15-19 year-olds and 9.5% of 10-14 year-olds reported being sexually active. The study found that younger adolescents were much less likely than older adolescents to know that using condoms is a way to avoid an STI (59% for 10-14 year-olds versus 88% for the 15-19 age group). Furthermore, a small but worrisome proportion of youth (21% of 10 to 14 year-olds and 5% of 15 to 19 year-olds) did not know of any way to avoid an STI.

Young women must also be given special attention since they, even more than young men, are highly vulnerable to the infection in developing countries. They make up nearly two-thirds of those under 25 years old with HIV worldwide (UNAIDS, 2006 a). UNAIDS/UNFPA/UNIFEM (2004) estimates that globally, young women are 1.6 times more likely to be living with HIV/AIDS than young men. In the Caribbean, most new HIV cases are

occurring among women aged 15-24 and they are 2.5 times more likely to be infected (UNAIDS/UNFPA/UNIFEM, 2004; ECLAC, 2005 a). In Trinidad and Tobago HIV infection levels are high among the youth, and the virus prevalence is six times higher among 15-19 year-old females than among boys of the same age (UNAIDS, 2005 b).

The higher vulnerability of young women to HIV are associated with gender discrimination, economic deprivation, deficiency in educational systems, lack of power to negotiate sexual relationships, high incidence of violence and rape – all factors which make women more susceptible to unwanted and unprotected sex. In Jamaica, for example, 12% of women aged 15-19 reported they were unwilling or coerced during their first sexual encounter (Hope Enterprises, 2001). It must be considered as well that young women are physiologically more vulnerable to contracting the virus than older women. Their reproductive tracts contain fewer layers of epithelial cells, which offer a less effective barrier against viral infection, than the multiple layers of modified epithelial squamous cells found in the vaginas of adult women (Anderson et al., 2002). Adolescent women need improved access to information about sexuality and reproduction, and to SRH services. In addition, it is important to view empowerment not only as an individual phenomenon but also as a collective process to provide adolescent girls with the social support necessary for the adoption of safe and responsible sexual behaviour (Gage, 2000).

ECLAC argues that there is an enormous gap between a general awareness that the virus and disease exist and the fuller knowledge required to make more informed decisions among female adolescents and young people: 96% compared to 14% in Haiti, 78% compared to 18% in Bolivia, 96% compared to 25% in Trinidad and Tobago and 95% compared to 28% in Guyana (ECLAC, 2005 a; data refer to 2000).

“Providing young people with health services that help prevent them becoming infected is a basic human right’s obligation, and all governments and communities need to ensure that these services are delivered.” (Dick et al., 2006: 191)

It has been argued that young people must be provided adequate SRH services and information. These population segments need to know how to reduce their vulnerability and be able to protect themselves against the epidemic. Despite the fact that the majority of young people have heard of AIDS, many still do not know how to prevent transmission and misconceptions about HIV and AIDS are widespread. A survey in Haiti identified 15% of young women and 28% of young men as having sufficient knowledge¹³ about AIDS (Monasch & Mahy, 2006), i.e., more than 80% of women and more than 70% of men, aged 15-24, still did not have adequate information.

Sexuality and life skills education must be strengthened, in a way that it fully promotes sexual and SRRs, the adoption of safe and responsible sexual behaviour, as well as gender equality and skills development. Nevertheless, the national MDGRs do not emphasize the need to invest in sexuality education. Safe sexuality education for gay and bisexual youth is

¹³ Sufficient knowledge was defined as the ability to identify two ways of preventing the sexual transmission of HIV and to reject three major misconceptions about HIV (Monasch & Mahy, 2006).

even more constrained. Efforts must include encouraging proper and consistent condom use and the use of sterile syringes. Kirby et al. (2006) elaborated a review of the literature on the effects of school based sexuality education and HIV education interventions on sexual risk behaviours among young people in developing countries. The studies examined presented strong evidence that sexuality education and HIV education interventions did not increase sexual behaviour and that a substantial percentage of interventions significantly decreased one or more types of sexual activity. Most school based interventions were considered very effective in increasing knowledge and at least half of the interventions had a positive impact on at least one of the reported sexual or protective behaviours.

“Comprehensive curricula for sexual education in schools are not widely used in the [Central American] region, particularly those that consider aspects of sexual orientation and provide information on the risks of HIV/AIDS and sexually transmitted infections.”
(Mordt et al., 2003: 14)

Expanding access to youth-friendly health services is another demanded intervention, since adolescents and young people are less likely to seek treatment for STIs than other segments of the population. Monasch & Mahy (2006) analysed data from 12 countries and found that, in 10 of them, the proportion of women aged 15-24 who reported having a sexually transmitted infection within the past 12 months and sought treatment was significantly lower than what reported women aged 25-49. The authors hinted that even when adolescents suspect that they have an infection, they often do not seek health services because of embarrassment, guilt or fear that their privacy will not be respected. Removing barriers for young people's access to all forms of HIV counselling and testing must therefore be a priority.

“Institutional approaches incorporating the perspectives and priorities of young people, encouraging their active participation and sensitive to their special needs, can involve them and empower their full citizenship. Young people need information and services that are responsive to their particular situations. They are particularly sensitive to issues of privacy, honesty, compassionate counseling and active engagement. Youth-friendly services seek to be responsive to these concerns and their impact needs monitoring.”
(UN Millennium Project, 2006: 131)

The implementation of a standard package of youth-friendly health services, both in and beyond the health system, is also one of the strategies recommended by the chapter on AIDS of the *World Youth Report 2003* (United Nations, 2004 a). Other recommendations of this report include strengthening life skills education in both schools and out-of-school programmes and to devise youth-oriented information, education, and communication focused on key messages to which every young person should be exposed.

Dick et al. (2006) reviewed the evidence base for interventions that aimed to increase young people's use of health services in developing countries. Sixteen studies were analysed (12 from Africa, 3 from Asia and 1 from Latin America) and they provided evidence of increased use of health services by this population group for those types of interventions

that included training for service providers, making improvements to clinic facilities and implementing activities in the community. The actions carried out by peer educators had a role in half of the studies: they stimulated demand, referred young people to the facilities, ensured that the facilities or services were welcoming, and provided information about sexual and reproductive health in clinics and in the community. In conclusion, the authors recommended the implementation of policies oriented to young people's demands.

A similar review, conducted by Speizer, Magnani and Colvin (2003), synthesized the emerging body of evidence on the effectiveness of HIV prevention programmes in order to understand better "what works" in the developing world. Their review suggests that youth-friendly service programmes work best when paired with other efforts aimed at changing community attitudes about young people's sexuality and vulnerability. Youth-friendly services that have been simply added on to existing programmes had little impact on service utilisation by youth.

Mass media interventions may also be very effective in influencing HIV-related outcomes among young people. Bertrand & Anhang (2006) systematically reviewed 15 studies that evaluated mass media interventions, published between 1990 and 2004. Eleven studies were from Africa, 2 from Latin America, 1 from Asia, and 1 from multiple countries; the data supported the effectiveness of interventions to increase the knowledge of HIV transmission, to improve self-efficacy in condom use, to influence some social norms, to increase the amount of interpersonal communication, to increase condom use and to boost awareness of health providers. The authors also indicated that fewer significant effects were found in terms of abstinence, delaying the age of first sexual experience or decreasing the number of sexual partners.

Some of the national MDGRs recognise the need to focus prevention strategies on young people, such as the following excerpt:

"The fact that the rate of infection is higher among females challenges Belize to effectively target girls and young women for attitude and behaviour changes. Statistics show that girls are becoming sexually active at younger ages. The strategy will necessarily have to include encouraging girls to delay sexual activity and to be self-reliant in protecting themselves as well as developing effective targeting strategies to reach girls and adolescents in non-formal settings." (Belize, 2005: 28)

6.4. The link between migration and the spread of AIDS

In the last decade, the relation between HIV epidemiology and migration has been widely documented (Decosas & Adrien, 1997; Santarriaga et al., 1996; Rugalema et al., 1999). Studies on certain highly mobile groups (e.g. truck drivers, itinerant traders, militaries, seafarers) have identified travel or migration as a risk factor for HIV infection. In many countries, regions with higher seasonal or long-term mobility also report higher infection rates; the same happens along major transportation routes and in border regions. In general, foreign nationals also have higher HIV incidence rates. Yet, governments have

not done much to address this problem. In the early years of the epidemic countries tried to keep HIV-positive people out by restricting their entry. Some 60 countries apply such restrictions, particularly to long-term visitors. However, according to WHO, UNAIDS, and the Office of the High Commissioner for Human Rights, these restrictions have no public health justification.

Migration impacts on the health MDGs through three intersecting paths: the first is the relationship between human mobility and disease transmission; the second relates to the conditions migrants arrive in the country or area of destination; and thirdly the impact of the flight of medical professionals on public health – the medical brain drain.

6.4.1. Disease transmission

As UNFPA (2003 b) argues, labour migrants have been found to have higher infection rates than non-migrants, independent of the HIV prevalence at the site of departure, or the site of destination. UNAIDS (2004) recognises that human mobility increases the odds of transmission of HIV. Migrants frequently are in conditions that include long absence from the social control of the home environment and lack of access to RH services (UNFPA, 2003 b). Many men who emigrate to work with the goal to send remittances to their homes engage in extra-marital encounters without due protection, contracting the virus and even contaminating their spouses on going back.¹⁴ Failure to address the health of migrants during the various phases of migration can obstruct successful integration and hamper effective post-emergency situations (Usher, 2005).

An illustrative case of all those claims about the impact of migration on HIV/AIDS epidemics is that of Mexican migrants. According to Mexico's National Council for the Prevention and Control of AIDS¹⁵, a significant amount of cases of AIDS can be traced back to residence in the US. Also, AIDS is more prevalent in US cities and States where migration is common. Stunning numbers demonstrate that in California, for example, 68% of people living with AIDS are of Mexican origin and three fourths of them are men of working age. To worsen the figure, around 90% of Mexican migrants do not have access to the US health system. Moreover, increasing numbers of women and adolescents are acquiring the virus in the poorest Mexican States from where migrants leave and return. Upon return, husbands transmit the virus to partners so that, in rural areas, AIDS prevalence is rising (Salgado de Snyder, 1996).

Parrado et al. (2004) examine the relation between the spread of HIV and male migrants' sexual risk behaviour among US Hispanics. The prevalence and frequency of the use of services of commercial sex workers was examined among 442 randomly selected Hispanic migrants in Durham, North Carolina, between April 2002 and July 2003.

¹⁴ Lurie et al. (2003) investigated HIV-1 prevalence among (internal) migrant and non-migrant men and their wives in KwaZulu-Natal, South Africa. Among migrant men, HIV-1 prevalence was 25.9%, as opposed to 12.7% among non-migrants. The wives of these migrants also had higher HIV-1 prevalence, although the difference was smaller. In a more formal multivariate model, that controlled several other relevant background characteristics and sexual behaviours, the odds ratio for men that had lived in four or more different places was 3.56.

¹⁵ Data gathered at Catholic Agency for Overseas Development (NGO), at <http://www.cafod.org.uk/policy-papers>.

Regression techniques were used to model predictors of visits to commercial sex workers, and descriptive data on condom use with commercial sex workers were examined: 28% of respondents reported using the services of a commercial sex worker during the previous year, increasing to 46% among single men and 40% among married men living apart from their wives. Men with spouses in the city were less likely than other men to use commercial sex workers (odds ratio, 0.1). Reported rates of condom use with commercial sex workers were high, but were likely to fall if familiarity with a commercial sex worker increased: 91.7% declared that they always used a condom, but this percentage dropped to 87% if they felt that she had a good reputation and to 64% if they knew her well. The authors hint that interventions must take into account social context and target the most vulnerable migrants in order to help migrants and their partners avoid HIV infection.

Bronfman et al. (2002) present a multi-centre study that analyses the socioeconomic, cultural and political contexts that give rise to population mobility, and its relationship to vulnerability to STI/HIV/AIDS. In 11 transit stations (border towns, port cities, areas where mobile populations congregate) in Central America and Mexico, a household survey (750 households) of the local population was conducted to analyse demographic, socioeconomic characteristics, and information known and opinions held about HIV/AIDS and mobile populations. In-depth interviews with key informants, as well as an ethnographic study, were undertaken to identify interactions between local and mobile populations. Within such social contexts, transactional sex, sex for survival, rape and non-professional commercial sex happen in conditions that increase the risk of the transmission of STI/HIV, such as infrequent condom use. Migrant women and sex workers are particularly vulnerable in this context. A wide gap exists between information about STI/HIV transmission and reported prevention practices. The authors conclude that, given the conditions that exist in these transit stations, interventions should be multi-sectoral, sustainable, and should promote the human rights of various groups, including women and people living with HIV.

Despite many good practices and policies, much remain to be done in the HIV/AIDS field. A first challenge is the collection of data to better understand the exposed links. For that, an initial difficulty is the evident lack of information on undocumented migrants that leave Latin America and carry the disease upon their return. As a major threat to the security of the families back home, returnees not always have access to proper official health systems and diagnosis remain to be made only very late when the risk of spreading is already mature. As a result of the lack of data, prevention has to be the basis for fighting HIV/AIDS. Successful initiatives involve, as stated in the ICDP Programme of Action, education, awareness and involvement of all instances of government and civil society, along with regional and international organisations. Two exemplary programmes in Latin America, complimented along with others by the Population Council can be cited here:

- The Mesoamerican HIV/AIDS and Mobile Populations project coordinated by Mexico's National Institute of Public Health implemented HIV-prevention interventions on border crossings in Mexico and Central America.

- The Population Council's "Health on the Road" programme, that provides STD/HIV and other health services and education to truck drivers crossing the Brazil-Paraguay border.

6.4.2. Hardships upon arrival

Upon arrival in a new country, migrants not unusually face the consequences of harsh travel conditions, aggravated by sudden weather changes and by the risk of consumption of unsavoury food. Their immunological system is affected by the new surroundings, becoming more vulnerable to infectious diseases. At the same time, their legal status in the new country is not always defined, preventing full access to public health services.

"Many migrants do not have access to adequate health care for a variety of reasons including undefined status, lack of health insurance, cultural barriers and lack of economic resources. Social exclusion, discrimination and poor living conditions negatively affect the health of migrants and their dependents." (UNFPA, 2005 a: 5)

A study by Kerr-Pontes et al. (2004) analyses the effects of belief systems related to sexuality and AIDS and the epidemic outcomes among urban migrant population in Northeast Brazil. Interviews were conducted among participants located in neighbourhoods known for having large migrant populations. Belief system concepts and values, as well as the social organisation of sexuality revealed to represent obstacles both to AIDS prevention and to condom use. Migrants' vulnerability to HIV also increases in contexts of hunger, lack of prospects, poverty, exclusion, and prejudice. The authors hint therefore on the importance of focusing on different configurations, beliefs, representations, and forms of social organisation of behaviour in the implementation of public policies, and sexuality education and campaigns.

6.4.3. Medical brain drain

In some countries of the LAC region, the brain drain is undoubtedly a serious issue that deserves to be addressed by public authorities. Particularly in some Caribbean countries such as Jamaica, the health sector is severely affected by the pull of more attractive employment opportunities for physicians and especially nurses in the neighbouring US, leaving locals without proper medical attention, which unsurprisingly undermines these countries' health indicators, including health related Millennium Development indicators.

The flight of health professionals from areas with a high incidence of HIV/AIDS cripples the quality of attendance, as the health care worker-to-population ratio plummets dramatically at the expense of patients.

"In some countries [the inappropriateness of human resource policies] has led to an exodus of health professionals and increasing emigration by skilled personnel to developed countries, which has had serious negative effects in countries such as Ecuador, Bolivia, Honduras and Peru. In the case of the Caribbean, the economic loss associated with the cost of training of health workers who then migrate is considerable." (ECLAC, 2005 a: 158)

The Guyana national MDGR (2003) expresses the concern that the prospect of employment and higher wages encourage highly skilled professionals to pursue prosperity abroad:

“There is a pressing need to improve salaries in order to build up a critical mass of skills which were lost and which continue to be lost in the continued out-migration.”
(Guyana, 2003: 29)

If migrants are mobilised to return on temporary programmes and to tutor young professionals of the health sector, human resource losses due to the brain drain might be mitigated, overcome and even become beneficial to societies (Usher, 2005), resulting in a brain gain. In summary, UNAIDS (2001) lists the recommendations regarding population mobility and the prevention of the spread of AIDS as follows:

- Put migrants and mobile people into HIV/AIDS strategic planning and into national and community AIDS plans;
- Establish culturally and linguistically appropriate outreach in HIV/AIDS programmes targeted to migrants and mobile people, and establish peer counselling;
- Support associations of migrants and help them integrate HIV/AIDS into their work;
- Focus HIV prevention efforts in zones where there is increased likelihood that risk behaviours will occur and HIV will be encountered, e.g. truck shops, bus and train stations, harbours, markets;
- Implement programmes that cross national borders;
- Develop and implement pre-departure briefings, post-arrival and reintegration programmes, and use the experience of those going back and forth across borders;
- Improve the legal status of and legal support for migrants and mobile people and their families;
- Work with those who employ migrants to improve their living and health conditions;
- Make local health care facilities more accessible and user-friendly to migrants and mobile people;
- Conduct operational research on the links between migration, mobility, and HIV.

6.5. A new Target under MDG 6: universal access to treatment for HIV/AIDS

In his presentation to the General Assembly on October 2nd, 2006, the former Secretary-General announced a new Target under MDG 6, namely to come as close as possible to universal access to treatment for HIV/AIDS by 2010 for all those who need it. The Target is important but polemic, since it requires a solution to the conflict with respect to the intellectual property rights on AIDS drugs which are already being distributed in generic formats in some countries, such as Brazil.

“Prevention strategies are obviously crucial, but poor and rich countries also need to work together to ensure that people infected with HIV are provided access to the drugs they need, as called for in Target 17 of the Millennium Development Goals.”

Once people are infected, drug treatment can prolong their lives.” (UN Statistical Division, 2005: 9)

Indeed, generic drugs policy may be an effective means to facilitate technological transfer. It requires combined efforts by governments and public-private partnership. The LAC region provides treatment to approximately 68% of its population in need – the highest coverage of any region in the developing world (WHO/UNAIDS, 2006). Countries are either working on patent restrictions to make ARV drugs more available or providing free anti-retrovirals to patients.

For the work of UNFPA, the implications of this new Target, to the extent that they seek to expand treatment options for those already infected, are likely to be relatively minor because UNFPA’s role in the combat of HIV/AIDS has to do primarily with prevention and with the social consequences of AIDS. On the other hand, the need for developing an affordable and effective microbicide¹⁶ has been broadly stressed.

Target 8: By 2015, to have halted and begun to reverse the spread of malaria and other serious diseases

6.6.1. Malaria and RH

The interactions between malaria and SRH are basically of two kinds: those that link malaria to pregnancy and those that link malaria to HIV/AIDS. With respect to pregnancy, the effects run in both directions. Pregnancy reduces women’s immunity to malaria, which can lead to adverse health outcomes for the mother, including anaemia, involuntary abortion, intrauterine growth retardation, cerebral malaria, and even death (Craig, 2004; Reuben, 1993). On the other hand, severe anaemia due to malaria increases the risk of maternal mortality. The health and survival chances of the infant are also affected by malaria, which increases the risk of stillbirth and low birth weight. Universal access to SRH services would help to ensure that pregnant women in malaria-endemic areas receive two preventive treatments of an effective anti-malaria drug during their pregnancy (intermittent preventive treatment). At present only 5% of women in malaria-endemic areas receive such treatment.

With respect to HIV/AIDS, WHO (2004 d) recommends that certain aspects of both malaria and HIV/AIDS control programmes be integrated:

- People living with HIV in areas of malaria transmission are particularly vulnerable to malaria (Verhoeff et al., 1999); their protection by insecticide-treated nets has high priority.
- HIV-positive pregnant women at risk for malaria should always be protected by insecticide-treated nets, and in addition – according to the state of HIV infection

¹⁶ Microbicide – in the form of vaginally applied gels, creams, film, foam, and suppositories – reduce women’s risk for acquiring STIs/HIV. It is currently considered a scientifically viable product, even though it is not yet available. The UN Millennium Task Force on HIV/AIDS hints that an ideal vaginal microbicide should be undetectable, long lasting, easy to use, effective, safe and affordable (UN Millennium Project, 2005 c). In 2001, The Rockefeller Foundation found that roughly US\$ 775 million would need to be invested over five years to make development of a safe and effective product probable by 2010 (Pharmaco-Economics Working Group of The Rockefeller Foundation, 2001).

- receive either intermittent preventive treatment with sulfadoxine-pyrimethamine (at least three doses) or daily cotrimoxazole prophylaxis.
- Programmes for the control of the two diseases should collaborate to ensure integrated service delivery for the diagnosis and treatment of both diseases, and in particular within the framework of reproductive health services.

6.6.2. Malaria and migration

“Reports of malaria are increasing in many countries and in areas thought free of the disease. One of the factors contributing to the reemergence of malaria is human migration. People move for a number of reasons, including environmental deterioration, economic necessity, conflicts and natural disasters. These factors are most likely to affect the poor, many of whom live in or near malarious areas. Identifying and understanding the influence of these population movements can improve prevention measures and malaria control programs.” (Martens & Hall, 2000: 1)

Movements of people can contribute to the transmission of malaria infections. In addition, programmes for malaria control/eradication, and for the improvement of public health in general, are hindered when applied to populations which are in whole or in part mobile. Historically, population movement has contributed to the spread of the disease (Prothero, 1977). Various malaria-eradication campaigns failed due to non-consideration of this factor in the 1950s and 1960s (Bruce-Chwatt, 1968), as movement of infected people from endemic areas to areas where the disease had been eradicated led to its resurgence. People on the move also increase malaria transmission in other ways, such as augmenting risk for acquiring the disease through the ways in which they change the environment and through the technology they introduce – deforestation and irrigation systems (Service, 1991). People can inadvertently transport infectious mosquitoes to malaria-free areas, reintroducing the disease. Population movement is also increasingly implicated in the spread of drug resistance in malaria (Rajagopalan et al., 1986).

The increasing numbers of people on the move are more difficult to access and to contact, and the costs of doing so are much greater than when people are relatively sedentary. People who move can be categorised as either active transmitters or passive acquirers (Prothero, 1977). Active transmitters harbour the parasite and transmit the disease when they move to areas of low or sporadic transmission. Passive acquirers are exposed to the disease through movement from one environment to another; they may have low-level immunity or may be non-immune, which increases their risk for disease.

The spatial and temporal characteristics and patterns of these two major categories vary considerably. Migration may occur in a regular fashion, movements taking place after due thought and planning for a new place of residence. Or it happens precipitately, as a consequence of unforeseen factors (war, environmental catastrophe, famine). Irregular migration is likely to be more significant in its effects on malaria. Circulation may occur for limited periods of time (daily), for longer periods which may extend for weeks, months or even years, or for periods which are defined by the length of seasons (winter/summer,

wet/dry). All of these can have significant effects on malaria. In addition, irregular migration, caused by political pressures or by environmental catastrophe, exposes people to physical and psychological stresses and consequently increases their susceptibility to malaria and other infections (Prothero, 1994).

Malaria risks can be increased in a number of ways. People can move from arid or high altitude malaria-free areas to irrigated or low altitude malarious ones, for example, as in movements of farmers, hunters, and gatherers between malaria-free and vector breeding habitats. People with little or no immunity risk contracting malaria when exposed to infected persons, particularly when strains of malaria are drug-resistant. Furthermore, physical and psychological stress reduce resistance to infection. Regular migrants, who return briefly to their places of rural origin, may be exposed to the risk of malaria infection.

Urbanisation

When accompanied by adequate housing and sanitation, urbanisation can lead to a decrease in malaria through reductions in human-vector contact and vector breeding sites. Generally, therefore, malaria control is more effective in urban than in rural areas, but the urbanisation process threatens this control. However, urbanisation in most developing countries usually take place in a rapid, unregulated fashion which leads to an increase in or resumption of malaria transmission because of poor housing and sanitation, lack of proper drainage of surface water, and use of unprotected water reservoirs that increase human-vector contact and vector breeding. Rural migrants may be infected and the makeshift temporary shanty towns in which they live provide habitats suitable for mosquito breeding. Manaus, the major city of the Brazilian Amazon, experienced several epidemic outbreaks in the 1980s among its shanty town neighbourhoods.

Colonisation of new territory

An increase in malaria can accompany colonisation of unpopulated or sparsely populated areas. The conditions of rural migrants, particularly temporary migrants across the region, make them vulnerable and make treatment very challenging. Settlers, who can have low-level immunity or are non-immune, may migrate into disease-endemic areas, spreading the disease. Inexperience with different soils and climates both degrades local environments and leads to the failure of family farmers to guarantee their permanence in the region (Hogan, 2002 a). Initially, housing tends to be basic, leading to close human-vector contact. Temporary dwellings are difficult to enter by official control operations and many times their structures are so poorly built that they are unsuitable for anti-vector spraying. Moreover, housing is often near rivers or lakes to facilitate water collection, increasing the exposure of humans to mosquitoes. Accelerated erosion and flooding that occasionally happen in tropical regions also favour vector breeding and further contamination. Activities to develop an area, such as deforestation and irrigation, can increase the number of vector breeding sites, contributing to an increase in malaria. Colonisation may be accompanied by major building projects,

such as dams, canals, highways, or mining activities – referred to as the tropical aggregation of labour – which can further enhance malaria transmission.

The movements of people for resettlement in “frontier/pioneer” areas are particularly favourable for increased malaria transmission. For instance, the Amazon has witnessed a resurgence of malaria associated with frontier settlement, recording more than a half of all malaria cases in the Americas. Today, virtually all endemic malaria occurs in the Amazon region (Sawyer, 1992). Throughout the world, there are various examples: such as forced resettlement in Ethiopia in the 1980s (Kloos, 1990); people moving from Indonesia’s malaria-free inner islands of Java and Bali to malarious outer islands where health services are inadequate to deal with it.

Many times, as Prothero (1995) points out, government initiatives are counterbalanced by the lack of experience and the inability to deal adequately with the more far-reaching implications of new population settlements. Another difficult aspect, particularly in relation to efforts to lessen contamination, is the presence in the region of short-term and circular migration. In the case of Central America, these trends are even more prevalent and occurrence of intra-country seasonal movements has helped in a large way the diffusion of the disease across countries. Rapid circular or seasonal migration, internal or international, all contribute to limit malaria control programmes and allow for infestation in new areas when migrants return. The spread of malaria in Central America was mainly caused by this interface. Prothero (1995) uses the example of Guatemala, where lands once free from malaria had it introduced by population movements from El Salvador.

Temporary dwellings cannot be protected with insecticide spraying. In clearing land, settlers are exposed to vector breeding habitats, and poverty limits their access to measures for protection against malaria. Besides agricultural settlement, malaria has increased through mining activities, which increase vector breeding sites. Mining camps create the perfect conditions for malaria infection and transmission. Temporary shelters provide little or no mosquito protection. In addition, miners are highly susceptible to malaria because they are often migrants from areas free from malaria, and thus lack immunity to the disease. In their search for gold, miners also routinely destroy the banks of local streams. The widened river beds then become swamplike habitats perfect for mosquito breeding. The costs of treating malaria are beyond most miners’ means, so many infected miners go untreated. Even when infected miners do buy medicine (often paid for with gold), they usually stop taking it once the fever recedes, but before they are entirely cured. As a result, drug-resistant strains of malaria, that are much more difficult and expensive to treat, have emerged.

In the case of Brazil, malaria reemerged through mobility related to colonisation, after having been practically eradicated from most areas of the Amazon region by the national malaria campaign in the 1950s and 1960s (Marques, 1986). Since the 60s, however, the incidence of malaria has increased dramatically because of massive population movements to colonise new territory.

New highways were built in the 1960s, linking the Amazon region to the rest of the country and attracting labourers to work on road construction. In the 1970s, many more

people were attracted to the region by agricultural settlements and hydroelectric projects. Finally, in the 1980s, the discovery of gold led to a greater influx of people, along with the establishment of hundreds of mines throughout the region. The population of Rondonia State, which received the greatest number of migrants, increased from 113,000 in 1970 to 1,200,000 in 1990. Malaria cases in Rondonia increased from 20,000 to 174,000 in the same period. In Brazil as a whole, approximately 50,000 cases of malaria were reported in 1970; by 1990, reports had increased to 577,520, representing 10% of the world's reported cases outside Africa (Camargo et al., 1994). Of this total, more than 98% were recorded in the Amazon region.

The Roraima Gold Rush and malaria

One of the reasons for the high population growth rate is the discovery of gold. The gold-mining boom has had several unintended consequences, including high levels of environmental degradation from mine tailings, deforestation, and deteriorating living conditions. In particular, malaria has swept mining towns across the region. In 1988, for instance, 50% of all malaria transmission in Mato Grosso occurred at gold mining sites (Cruz Marques, 1987).

The Roraima Gold Rush and subsequent immigration by miners have dramatically increased malaria incidence and deaths among the indigenous population. A survey at the Indian Hospital in the city of Boa Vista showed that malaria was the main cause of admission of Yanomami Indians from 1987 to 1989. Of the 144 deaths reported during this period, malaria was responsible for 51.8% (Oneron et al., 1991). Estimates suggest that nearly 10% of the Yanomami population died of malaria between 1987 and 1990. Between 1991 and 1995, malaria was responsible for 25% of all Yanomami deaths (Castro Lobo, 1996). Overall, about 20% of the Yanomami population contracted malaria, and in some of the villages the parasite infected more than 90% of the community.

Although the Roraima Gold Rush is waning, the legacy of malaria infection continues to pose a risk to Amazonian Indians. Annual rates of malaria incidence in areas where contact with miners and other immigrants is frequent are as high as 1,350 per 1,000 population, meaning that some individuals have had more than one attack of malaria in just one year. This is in sharp contrast to rates in the villages not affected by the invasion of outsiders, which run around 20 cases per 1,000. It is also substantially higher than malaria incidence among the general Amazonian population, estimated to be around 40 per 1,000 (Castro Lobo, 1996; Cruz Marques, 1987).

The types of population movement involved in the colonisation of the Amazon are migration and long-term circulation from malaria-free areas of Brazil to the malaria-endemic Amazon region. The people involved are non-immune passive acquirers who on becoming infected can become active transmitters. If these active transmitters return to their initial place of residence in a malaria-free but highly receptive area, they can reintroduce the parasite

and initiate an outbreak of malaria. Although in Brazil endemic malaria is mostly a problem of the Amazon region, other regions are or occasionally become malarious as well. For example, in 1985, 26 new active foci of malaria were recorded in Brazilian states outside the Amazon region (Marques, 1986). Settlers in the Amazon region are highly mobile, moving with daily, periodic, and seasonal circulation from settlements in unstable disease-endemic regions to hyperendemic regions of the rainforests. This mobility keeps settlements unstable and at high risk for epidemics through the constant flow of labourers (Camargo et al., 1994; McGreevy et al., 1989).

The reasons behind the extremely high incidence of malaria among indigenous peoples are not completely understood, but many factors, both socioeconomic and environmental, may be playing a role. First, malaria control activities such as house spraying and case detection and treatment that had been successful in the southeastern and northeastern regions of Brazil were unsuccessful in the heavily forested areas of the Amazon because of logistical and organisational difficulties and population mobility (Sawyer, 1992). Indoor spraying for malaria control proves ineffective as most mosquito bites occur outdoors. Second, the physical isolation of many of the groups in the Amazon may increase their susceptibility to malaria. Third, because most of these communities are in remote areas, the people have only limited access to health services. In addition, culturally determined behaviours may increase the risk of malaria transmission.

In Colombia, the annual parasite index (defined as the ratio between the number of cases reported and the population at risk) has increased threefold since the 1960s (Sevilla-Casas, 1993). This increase seems to be related to the migration of non-immune people to areas such as the Naya basin, where malaria is endemic, and to the circulation of groups within the Naya basin. The circulation is predominantly seasonal, related to agriculture. People descend from hills and terraces, where malaria risk is minimal, to the malarious delta zone to cultivate and harvest their crops. In doing so, they are exposed to the anopheline population of the area and are at high risk for malaria. A large number of people are involved in this circulation (approximately 60% of the area's population is mobile for approximately 4 months of the year), and this population density, combined with the large vector population, maintains transmission at high levels (Sevilla-Casas, 1993).

Macro level data on endemicity and mobility (associated with agriculture, logging and trade) in the Naya Basin of Colombia identified that malaria risk was greatest in the delta of the Naya river into which there were movements for economic reasons, at times when vector densities were high and biting most intense. This combination of high vector density ensured continuous and intense transmission of predominantly falciparum malaria, with high prevalence among both sexes, increasing with age from adolescence onwards as the range and number of people's activities increased.

Two matters emerged from this case which are of practical importance for the design of more effective measures of selective prevention and of adequate treatment in malaria control programmes, particularly among populations where a high proportion are mobile.

1. The need to identify areas where the risks of infection are greatest, and to concentrate control resources on these rather than spread them more widely.
2. Routine malaria surveys had been inadequately representing the numbers of infected women.

As mentioned in the previous section, non-immune pregnant women are particularly susceptible to malaria infection and should receive priority protection. Furthermore, women have been neglected in the study of tropical diseases, in general and as migrants who may be exposed to these diseases (Vlassoff & Bonilla, 1994).

Refugees

Malaria is one of the most commonly reported causes of death among refugees and has caused high rates of both illness and death among refugees and displaced persons in disease-endemic countries, such as Thailand, Sudan, Somalia, Burundi, Rwanda and the Democratic Republic of Congo. Population movement can increase malaria transmission but also spread drug-resistant falciparum malaria, and war itself can favour malaria transmission; its effect on agriculture and war management can increase vector-breeding sites; destruction of housing can increase human-vector contact; destruction of cattle can prompt zoophilic vectors to become anthropophilic if their usual food supply is disrupted (Onori & Grab, 1980); and control measures can be seriously diminished if health-care facilities are reduced or unavailable.

As a result of 15 years of continuous war, which displaced hundreds of thousands of people, Luanda, the capital of Angola, underwent an unprecedented population increase in the 1980s. This population movement resulted in a shift in malaria endemicity in Luanda from hypoendemic to mesoendemic level within 5 years (Kanji & Harpham, 1992). As a cause of child deaths, malaria moved from sixth to first place. Increasing parasite resistance to chloroquine also became a major problem. This situation arose because of the enormous influx of displaced people of low socioeconomic status into an environment with stagnant water reservoirs. The population movements that increased malaria transmission in Luanda were long-term circulation and migration from stable rural areas to an unstable urban area.

Intercontinental travel

The intercontinental transfer of malaria can occur through the introduction of an infective vector into a nonendemic-disease area, as in so-called airport malaria, or through the movement of a parasitemic person to a nonendemic-disease area, as in imported malaria. Airport malaria is defined as acquired through the bite of an infected tropical anopheline mosquito by persons whose geographic history excludes exposure to this vector in its natural habitat (Isaacson, 1989). The incidence of these cases is low and accounts for malaria transmission in industrialised countries, with recorded cases of malaria in Europe (UK, Italy) imported from Africa. There were also cases of outbreaks of presumed local mosquito-borne transmission in the US imported from Mexico.

As travel is an important form of movement, agreements are necessary to avoid malaria transmission. In Latin America, the most satisfactory of these agreements is the Southern Cone Pact involving Bolivia, Brazil, Paraguay, Uruguay, Argentina and Chile. Malaria is endemic in the first three and in a small area of northern Argentina, but the greater part of Argentina, Uruguay and Chile are malaria-free. The 2005 Argentinian MDGR (Argentina, 2005) notes that 75% of the malaria cases in the country during the past three years were of Bolivian immigrants. The Pact provides for the exchange of information on malaria and resources for its control. Elsewhere in the highly malarious areas of Latin America there are varying degrees of coordinated malaria control along and across international borders. Coordination and control are limited by political inaction and in some instances by political friction, these being exacerbated by refugee movements and by clandestine and illegal movements of migrant labour. In the coca-growing countries problems are made even worse by drug-trafficking and by attempts to control it.

The reports of the WHO Expert Committee on Malaria from the 1950s onwards have made reference to the significance of population movements for malaria transmission and for programmes for its reduction. In the past and at the present much lip-service has been paid to this significance but too little practical action has been taken. The fact that in antimalaria work people and their actions require the expert attention of social scientists, as do parasites and vectors the expert attentions of malariologists and entomologists respectively, has not been fully appreciated. It must be noted, nonetheless that advances have been made, particularly with the setting up in the late 1970s of the Socioeconomic Working Group in the World Bank/UNDP/WHO Special Programme for Research and Training in Tropical Diseases (Vlassoff, 1991).

MAIN IDEAS ON MDG 6:

General conclusions

- The number of people living with HIV in the LAC region in 2006 has risen to an estimated 1.7 million – compared to a 2003 estimate of 1.6 million. Approximately 65,000 died of AIDS, and 140,000 were newly-infected. The Caribbean is considered the second most affected region worldwide, with an estimated 19,000 fatalities in 2006, making AIDS the leading cause of death among adults aged 15–44 years. The total number of people living with HIV in the CAREC countries in 2003 was estimated at 109,395.
- In most countries of the LAC region, the highest levels of HIV infection are found among men who have sex with men. Sex between men has been estimated to account for 25–35% of reported AIDS cases in countries such as Argentina, Brazil, Guatemala, and Peru. Female sex workers have the second highest HIV levels, with prevalence ranging from less than 1% in Nicaragua and 2% in Panama, to more than 10% in Honduras.

- AIDS impacts negatively on all the other MDGs. The epidemic affects poverty outcomes (MDG 1) and impairs the universal access to education (MDG 2) – especially in countries with high prevalence rates. It also has forceful consequences on maternal and child health, since the HIV infection increases the frequency of obstetrical and neonatal problems. Therefore, while combating AIDS is a goal in itself, it underpins other development goals.

1. Gender aspects of HIV/AIDS

- The HIV/AIDS epidemic has increased rapidly in women in the LAC region, particularly in the CAREC countries. The male/female ratio among reported AIDS cases has shrunk substantially in the last two decades and, in some of the countries, women are now more likely than men to be infected.
- Women are socially and physiologically more vulnerable to HIV infection and gender inequalities are a major force driving the epidemic.
- As studies in Argentina, Mexico, and Nicaragua report, unprotected sex with non-monogamous husbands profoundly affects women's vulnerability to HIV, to the point where in Chinandegas, Nicaragua, it is estimated that married women are twice as likely as sex workers to be living with HIV.
- Gender-based violence reduces women's autonomy and impairs HIV prevention and access to health services. Evidence from several studies attests that women who suffer intimate partner violence are at an increased risk of being infected.
- The second highest HIV levels in the LAC region are found among female sex workers. As suggested by evidence, active policies designed to this segment must include the promotion of condom use as well as the implementation of substance-abuse services.

2. Integrating SRH and HIV/AIDS-related services

- As the percentage of women living with HIV is increasing among the total number of HIV/AIDS victims, actions focused on women as a part of SRH services become increasingly important. There is some evidence of the feasibility and effective synergy of integrating on-site primary care services into HIV VCT. Nevertheless, its implementation has not been widely adopted.
- In practice, however, the following problems create obstacles for articulation: leaders in both fields have different agendas and entrenched disciplines; bilateral and multilateral donors have separate departments for HIV/AIDS and for SRH, and have been funding programmes and services separately; responsibility for programmes, budgeting and funding for the two specialities are separate in national health systems; vertical programme structures have been initiated or maintained; the remit of the Global Fund to Fight AIDS, TB and Malaria has exacerbated this situation because AIDS funds have become so abundant that they tend to favour a vertical approach over efforts at integration with SRH and other related health areas.

- In terms of the assignment of resources, there has been some competition between SRH and HIV/AIDS programmes. While investments in family planning and SRH declined in real terms between 1995 and 2001, support for HIV and STIs rose eightfold. From a more practical viewpoint, combining SRH and HIV services requires special efforts to ensure that the integration does not overburden existing services and compromises the quality of services. The initial costs of integration, including staff training to meet the complex SRH needs of HIV-positive clients, also tend to be high.
- Prevention and management of STIs, and their early detection and treatment, are important not only in themselves, but also for HIV prevention – since some STIs increase the likelihood of HIV transmission during unprotected sex.
- Integrating services improve awareness and knowledge about HIV/AIDS, and it may also promote voluntary counselling and testing and condom use. As studies indicate, counselling women in SRH services does promote communication with husbands concerning HIV risk and preventive behaviour.
- Integrating services may also contribute to widening the use of dual protection, by signaling that the risk of STIs should be considered in contraceptive choice.
- A study based on data from 14 high prevalence countries estimates that the cost per child death averted could be reduced from US\$ 2600 under conventional MTCT strategies to a mere US\$ 360 if a family-planning component were added. The cost per averted infection would fall from US\$ 1300 to US\$ 660. It is estimated that in Sub-Saharan Africa family-planning services are preventing HIV infection in more infants than the provision of nevirapine and are more cost-effective for this purpose.
- Estimated prevalence of HIV-infected pregnant women in the LAC region is considerably high. Expanded SRH services are ideal settings for addressing strategies for MTCT prevention. Comprehensive and confidential health care for women living with HIV/AIDS and their infants must be guaranteed.

3. The need to focus on youth

- The high prevalence rates of HIV infection among young people require approaches to prevention designed for their specific needs and demands.
- Programmes must consider that more young people are having sex at earlier ages and with more partners. Evidence from Brazil, Jamaica, and St. Marteen point out to both early sexual activity and unprotected intercourse.
- Young women must be given special attention since they are highly vulnerable to HIV infection.
- Sexuality and life skills education must be strengthened, in a way that it fully promotes sexual and SRRs, the adoption of safe and responsible sexual behaviour, as well as gender equality and skills development. Studies suggest that most school based interventions are very effective in increasing knowledge and in promoting protective behaviours.

- Expanding access to youth-friendly health services is another demanded intervention, since adolescents and young people are less likely to seek treatment for STIs than other segments of the population. Training for service providers, improvements to clinic facilities, and implementing activities in the community increase young people's use of health services.

4. The link between migration and the spread of AIDS

- Regions with higher seasonal or long-term mobility (border towns, port cities, areas where mobile populations congregate) report higher infection rates. Labour migrants have been found to have higher infection rates than non-migrants, independent of the HIV prevalence at the site of departure, or the site of destination.
- Many men who emigrate to work with the goal to send remittances to their homes engage in extra-marital encounters without due protection, contracting the virus and even contaminating their spouses on going back. An illustrative case of all those claims about the impact of migration on HIV/AIDS epidemics is that of Mexican migrants.
- Migrant women and sex workers are particularly vulnerable in contexts of migration. Transactional sex, sex for survival, rape and non-professional commercial sex happen in conditions that increase the risk of the transmission of STI/HIV, such as infrequent condom use.
- Upon arrival in a new country, migrants not unusually face the consequences of harsh travel conditions, aggravated by sudden weather changes and by the risk of consumption of unsavoury food. At the same time, their legal status in the new country is not always defined, preventing full access to public health services.
- In some countries of the LAC region, the brain drain is undoubtedly a serious issue that needs to be addressed by public authorities. The flight of health professionals from areas with a high incidence of HIV/AIDS cripples the quality of attendance, as the health-care worker-to-population ratio plummets, at the expense of patients.

5. A new Target under MDG 6: universal access to treatment for HIV/AIDS

- The new Target under MDG 6 is important but polemic since it requires a solution to the conflict with respect to the intellectual property rights on AIDS drugs which are already being distributed in generic formats in some countries, such as Brazil.
- Indeed, a generic drugs policy may be an effective means to facilitate technological transfer. It requires combined efforts by governments and public-private partnership.

6. RH, migration, and malaria

- With respect to pregnancy and malaria, the effects run in both directions. On the one hand, pregnancy reduces women's immunity to malaria. On the other

hand, malaria increases the risk of maternal mortality, since it may lead to anaemia, involuntary abortion, intrauterine growth retardation, and cerebral malaria. The health and survival chances of the infant are also affected by malaria, which increases the risk of stillbirth and low birth weight.

- Universal access to SRH services would help to ensure that pregnant women in malaria-endemic areas receive preventive treatments during their pregnancy (intermittent preventive treatment).
- People living with HIV are particularly vulnerable to malaria. In areas of malaria transmission, both malaria and HIV/AIDS control programmes must be integrated.
- Human migration is one of the determinants of the reemergence of malaria. In addition, programmes for malaria control/eradication, and for the improvement of public health in general, are hindered when applied to populations which are in whole or in part mobile.
- When accompanied by adequate housing and sanitation, urbanisation can lead to a decrease in malaria. Nevertheless, urbanisation in most developing countries usually take place in a rapid, unregulated fashion which leads to an increase in or resumption of malaria transmission because of poor housing and sanitation, lack of proper drainage of surface water, and use of unprotected water reservoirs that increase human-vector contact and vector-breeding.
- The conditions of rural migrants, particularly temporary migrants, contribute to their vulnerability. The movements of people for resettlement in “frontier/pioneer” areas are particularly favourable for increased malaria transmission. The Amazon, for example, has witnessed a resurgence of malaria associated with frontier settlement, recording more than a half of all malaria cases in the Americas.
- As travel is an important form of movement, agreements are necessary to avoid malaria transmission. In Latin America, the most satisfactory of these agreements is the Southern Cone Pact involving Bolivia, Brazil, Paraguay, Uruguay, Argentina and Chile. Malaria is endemic in the first three and in a small area of northern Argentina, but the greater part of Argentina, Uruguay and Chile are malaria-free. The Pact provides for the exchange of information on malaria and resources for its control.