

SEXUALLY TRANSMITTED DISEASES AND REPRODUCTIVE HEALTH

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Reproductive tract infections (RTIs) including sexually transmitted diseases (STDs), are a neglected area in public health in most countries, both in the developing and developed parts of the world. This is despite overwhelming evidence for their impact on health, particularly that of women, young people and neonates. It is estimated that 333 million curable STDs occur globally every year, most of them in developing countries(1). In many developing countries STDs rank among the top five conditions for which adults seek health care service, while post-abortion, postpartum and postnatal infections due to RTIs are major causes of maternal death. Whereas in most industrialised countries there has been a spectacular decline in the incidence of STDs, particularly gonorrhoea and syphilis, they are on the rise in most developing countries. A total of 33.4 million adults and children is estimated to be living with HIV/AIDS as of end 1998. It is also estimated that a total of 13.9 million adults and children will have died because of HIV/AIDS since the beginning of the epidemic, with 2.5 million deaths in 1998. Approximately one-fifth of these deaths during 1998 occurred in children and 45% of the estimated adult deaths were in women(2). HIV and AIDS particularly affect young people. In fact, 50 per cent of HIV infections have occurred in the age group 15-24. This has an important impact on the economy of many countries since the group most affected constitutes the bulk of the workforce.

The epidemic of RTIs and STDs in the developing world is characterised by a high incidence and prevalence, a high rate of complications, an increasing problem of antimicrobial resistance, especially for most STDs, and the increased risk of HIV infection (3). Important factors contributing to the problem in developing countries are population pyramids that are heavily weighted towards young individuals, fast increasing urbanisation and the low status of women. However, until recently, prevention and control of STDs was not a priority for most countries and development agencies.

The victims

STDs and other RTIs have become a silent epidemic that is adversely affecting women's lives. Each year, thousands of women suffer physically as well as socially, or die needlessly from the consequences of these infections, including infertility and pregnancy wastage, cervical cancers, ectopic pregnancy, acute and pelvic infections, and puerperal infections. The burden of reproductive ill-health falls overwhelmingly on women in developing countries (see text box 1) (4).

For example, over 90% of all maternal deaths occur in the developing world. Women are especially vulnerable to sexually transmitted diseases and still bear most of the responsibility of contraception, including the consequences of contraceptive failure. For many women, this happens because they receive medical attention too late, if at all. The irony of this is that the vast majority of illnesses especially RTIs and STDs are curable; early diagnosis of, and treatment for most RTIs and STDs do not require high technology health care and therefore, morbidity and mortality due to these illnesses is preventable. Across the world, millions of adolescent girls and boys are suffering from unwanted pregnancies and STDs, and their severe consequences. In most countries one third of the STDs occur among adolescents below the age of 20 years. Adolescents are at risk of serious reproductive health illnesses including STDs because they lack access to the necessary information and service, or they receive poor quality services from providers who are judgmental or moralistic, untrained to diagnose and provide appropriate care or to deal with sex and sexuality, poorly supervised, or ill equipped.

Reproductive Ill-Health	
Category	World wide affected persons
Couples with unmet family planning needs	120 million
Infertile couples	60-80 million
Maternal deaths annually	586 thousand
Cases of maternal morbidity annually	20 million
Prenatal deaths annually	7.2 million
Unsafe abortions	20 million
Adults with HIV/AIDS	20.1 million
Annual adult incidence of HIV infection	2.75 million
Annual incidence of curable STDs	333 million
Women living with invasive cervical cancer	2 million
New cases of cervical cancer annually	450 thousand
Women with genital mutilation	85-110 million
Text Box 1 (4)	

Women, especially young women, are more vulnerable than men in regard to STD and its complications. The high prevalence of STD among women attending antenatal, family planning, or gynaecological clinics in developing countries indicates the extent of the STD problem. For example, in studies in developing countries up to 19% of pregnant women have gonorrhoea or chlamydia and up to 20% have syphilis (see text box 2) (5-25).

Prevalence of STD in pregnant women			
Country	GC (%)	CT (%)	Syphilis (%)
Botswana	14		7
Chile	1	6	
Gambia	7	7	17
Haiti	11	10.1	11
India	8		4
Kenya	18	20	4
Malaysia	54		3.3
Senegal	19	12.5	20.8
South Africa	12	11	7
Thailand	11.9	12.8	
Zaire	2	6	1
Note: GC – Gonorrhoea, CT – Chlamydia Text Box 2 (5-25)			

Biologically women are more susceptible to most sexually transmitted diseases than men, at least in part because of the greater mucosal surface exposed to a greater quantity of pathogens during sexual intercourse. In addition, the risk of transmission of STDs, including HIV infection, is greater whenever the mucosa is damaged. As a result of such factors most STDs, including HIV infection, are transmitted more readily from men to women than from women to men. Women with STD are more likely than men to be asymptomatic, and therefore are less likely to seek treatment for STD, resulting in chronic infections with more long-term complications and sequelae (see text box 3) (7, 8, 26-29).

Women and sexually transmitted diseases

It is estimated that 165 million new cases of curable STDs occur globally each year among women aged 15-49 years. Case numbers are distributed as follows with many women having more than one disease:

- syphilis 6.5 million
- gonorrhoea 3.1 million
- chlamydia 47.0 million
- trichomonas 80.0 million

STDs in women are not easily identified and cured for a number of reasons -

- over 50% of STDs in women are asymptomatic;
- diagnosis is difficult
- women's access to services is frequently poor, because STD management is rarely provided as part of an integrated approach to women's health needs.
- This leads to complications and sequelae which seriously impair the health of women in developing countries causing considerable morbidity and mortality:
- STDs cause pregnancy-related complications, premature birth, stillbirth and congenital infections;
- 1-5% of all maternal mortality is due to ectopic pregnancy mostly attributable to STDs;
- 35% of postpartum morbidity is attributed to STDs;
- almost two-thirds of cases of infertility among women are attributed to STDs;
- 17-40% of all gynaecological admissions are due to PID, mostly due to STDs;
- almost half a million new cases of cervical cancer occur each year in the world. Cervical cancer is the second most common cancer in the world.

World wide, the disease burden of STD in women is more than 5 times that of men.

Text Box 3 (1-7, 8, 26-28)

The factors that contribute to the higher rate of STD as well as HIV in women are mostly related to economic and gender inequalities. Poverty and urbanization in many developing countries drive men to cities for work, resulting in concentrations of men away from their families and in demand of sexual services. These same factors drive women into prostitution as a survival strategy, and limit access to proper health care. Where cultures expect women to be passive and subservient to men, women have little or no control over decision-making relating to sexuality, nor do they have control over sexual behaviour of their male partners or the use of condom for prevention of STD/HIV or pregnancy. The awareness of reproductive health problems and need for care in women is generally low, so symptoms of STD may not be recognized as such. Stigmatisation and various cultural norms impede appropriate health care seeking behaviour, while acceptable and accessible services for diagnosis and treatment may not be available for those who do seek health care.

In addition to all the above factors, many STDs increase the probability of transmission and acquisition of HIV infection. The presence of HIV alters the morbidity of STDs, making control more difficult. Although RTIs and STDs seriously undermine the success of other health initiatives, they have been ignored because of widespread beliefs that they are not serious, do not kill, or are too complicated and expensive to control. RTIs/STDs have also been neglected because deeply held attitudes and values make them socially taboo subjects among women and men at all levels of society. This culture of silence prevents changes in long standing behaviour related to sexuality and gender, and has inhibited the development of effective information and services. It is now time to re-evaluate long standing assumptions about the impact and feasibility of systematic prevention and control efforts, and to examine critically the national and international policy implications of RTIs and STDs in the developing world.

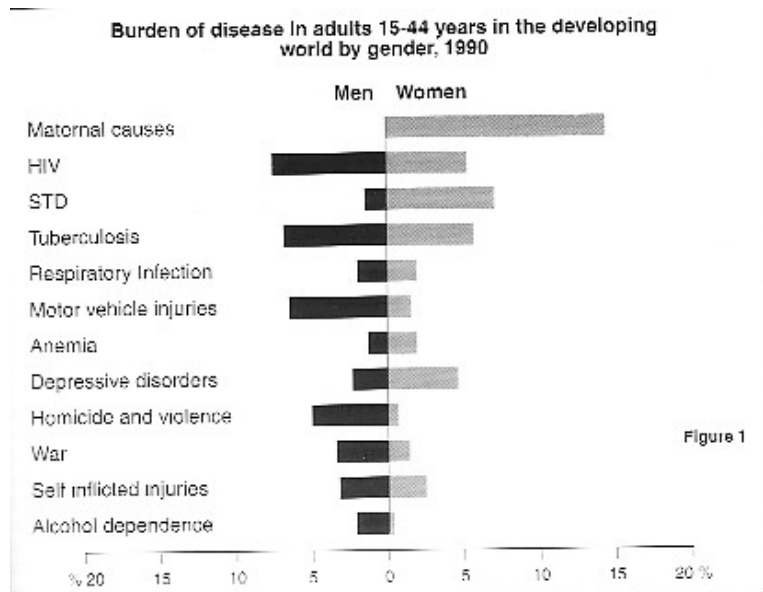
The impact

Even though there are millions of people infected with HIV, we are only at the beginning of the epidemic of illness associated with HIV and AIDS. In 1990, about half a million people required care for AIDS; in the year 2000 this figure will be 2.2 million. In hard hit cities, AIDS patients already occupy half or more of hospital beds. The weak health and social systems of many countries are finding it difficult if not impossible to cope with the growing numbers of people falling ill. The epidemic is having devastating effects on individuals, families, and entire communities.

For women, HIV infection has added its burden to the one they carry from diseases related to STD, pregnancy and childbirth. Women's risk of HIV infection has climbed steadily and the proportion of women represented 40% of all new AIDS cases; up to 50% of all new cases of HIV infections were in women, mainly those aged 15-24 years^{29,28}. Female vulnerability has become increasingly clear in Africa and Asia. By the year 2000, an estimated 14 million women will have been infected with HIV and about 4 million will have died of AIDS. Related to women's infection comes the risk that their infants will be infected before or during childbirth or during breast-feeding. The risk of mother-to-infant transmission in Africa is around 35-40% while in the developed countries it is typically under 20%.

Young people are particularly affected by HIV and AIDS. In fact, 50% of HIV infections have occurred in 15-24 years old. This has an important impact on the economy of many countries since the group most affected constitutes the bulk of the workforce. The costs of lost production are generally thought to be 10-20 times greater than direct medical care costs.

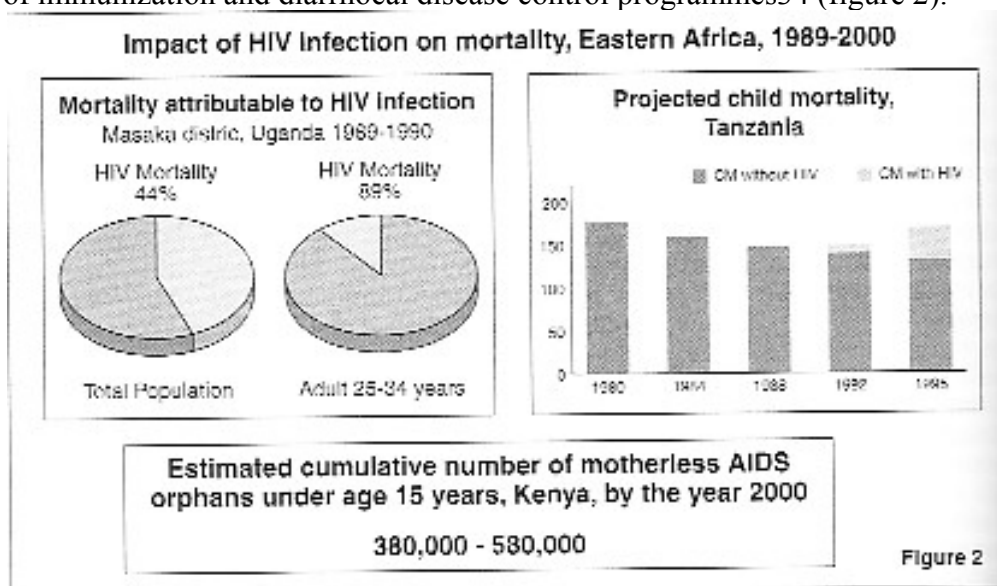
The socio-economic burden of sexually transmitted infections, in terms of direct and indirect costs, is growing. The AIDS threat to the economy again stems from the age group most affected - young and middle-aged adults. In its World Development Report for 1993, the World Bank estimates that for adults between 15 and 44 years of age in the developing world, STDs not including HIV infection are the second cause of the burden of disease in women, after maternal morbidity, and mortality. In men, HIV infection ranks first, before tuberculosis, motor vehicle injuries, and homicide and violence. If HIV infection is combined with conventional STD, sexually transmitted infections account for nearly 15% of all health lost in this critical age group for society (figure 1) (30,31).



As the principal caretakers in the home, the woman's burden is particularly great both during her spouse's illness and after his death - and, many are battling HIV infections themselves. Where there is no social security and legal protection, women who become AIDS widows may have to face the loss of land, housing, goods, inheritance, and even custody over their children.

Of the three fundamental determinants of population size - births, deaths and migration - the most obvious effect of the epidemic will be on the death rate. Unlike most other diseases, the majority of deaths due to AIDS occurs during the most productive years of life. For example, in Thailand, 78 per cent of the reported AIDS cases are between the ages of 20 and 49. In some cities in the United States and sub-Saharan Africa AIDS is the leading cause of death among adults between 15 and 49.

HIV infection in Uganda has been responsible for 44 per cent of all mortality, and 89% of mortality in adults between 25 and 34 from 1989-1990. HIV has also shown to be responsible for negating advances in child survival in countries such as Tanzania, where it is estimated that child mortality in 1995 will be equal to that in 1980 despite decreasing trends in child mortality which began in 1980 as a result of immunization and diarrhoeal disease control programmes³⁴ (figure 2).



The interrelation family between planning and HIV/AIDS is another important issue which needs urgent attention. Way and Stanecki projected that without AIDS, the population of Uganda in the year 2010 would be expected to be about 33 million but with AIDS it is instead estimated at 24.5 million³⁵. This has prompted some policy makers in the region say that there is no demographic rationale for fertility regulation in sub-Saharan Africa. This attitude will affect family planning initiatives in the region.

Reproductive health

Conventional STD control programmes, directed primarily at men and at high risk groups, are typically inaccessible to women and young people in the general population. Women are constrained from using these services because of social censure, and financial and personal costs. Conventional STD programmes, which serve mostly men, often fail to inform and serve the partners, especially stable partners. STD care services are not integrated into existing family planning and maternal and child health care service because of fear of stigmatisation of these services. One of the better mechanisms for identifying and serving women at high risk of infection, and their partners, is thus lost. RTIs/STDs and their sequelae are intertwined with key health-related development programmes, such as those concerned with family planning, child survival, women's health, safe motherhood, adolescent health, and HIV prevention. RTIs/STDs have profound implications for the success of each of these initiatives. Conversely, each of these initiatives provides a crucial opportunity for the prevention and control of RTIs/STDs.

Change of emphasis

The current emphasis on reproductive health began when human rights and women's health advocates began to question the rationale of traditional policies that mainly focused on reducing population growth through the provision of family planning services. During the 1980s, attention was focused on the child. Child survival strategies and programmes were developed with the objective of reducing infant and child mortality. Family planning and child survival programmes were dealt with separately and with great intensity and investment of international and national efforts and resources. The combination of maternal and child health and family planning (MCH/FP) represents the first attempt to bring the two components together and deal in a more comprehensive manner with aspects of reproductive health. The increasing prevalence of STDs and AIDS sparked further discussion on the best ways of managing and providing MCH/FP services. Client expectation also began to change over the years. At the International Conference on Population and Development in 1994 in Cairo, there was consensus among national delegations on the need for a more comprehensive, client centred view of reproductive health and for the implementation of reproductive health programmes in addition to family planning. Co-ordinated planning is designed to lead to conceptually balanced and technically sound approaches that best serve people's needs. There is conceptual overlap and strategic interdependence among programmes such as family planning, safe motherhood, women's health, adolescent health, child survival, and prevention of RTI's STDs and HIV. Integrated programmes, co-ordinated allocation of resources, and concerted action can achieve a critical mass of resources and effectiveness where separate programmes are ineffective because of limited financial or human resources.

There appears to be a considerable potential for increasing the effectiveness of reproductive health programmes by integrating elements to prevent RTI/STD related morbidity and mortality.

Current programmes

Most countries have programmes dealing with particular components of reproductive health. Generally, they have tended to be fragmented and vertical, with a focus either on a particular disease such as STD or HIV/AIDs, or on a general area such as family planning or maternal and child health. Vertical programmes often overlap. Because of the interdependence of the service, a more integrated approach, establishing links between information and various services for promotion and prevention as well as care would have many advantages. Such an approach would improve access to and quality of services, be more responsive to clients' needs, more cost effective, more humane and comprehensive and more likely to reach groups such as women and young people who are currently poorly served. In developing countries, the need for integrated services is even more acute because so few facilities are available.

Moreover, access to services is usually more cumbersome and time-consuming. Therefore, when clients make the effort to obtain one particular service, the full range of preventive care should be offered.

Although there is general consensus on the need to work towards the development of a comprehensive approach to RTI/STD control, in practice, programme development will require prioritisation on the basis of countries' need and available resources within the context of reproductive health. In most developing countries, 80-90 per cent of the population is dependent on primary health care services such as dispensaries and health centres. In order to make maximum use of scarce resources, it is essential that appropriate public health strategies for the prevention and control of RTIs/STDs be implemented and integrated into basic health care, maternal and child health care, and family planning services.

Such strategies are more responsive to the needs of individuals and the community, improve access, quality and use of services, are more cost-effective and can meet the needs of groups at risk and not adequately reached by existing services.

Priority interventions and actions

Policy makers, who are working with programme managers, health care advocates, service providers, clients and others, need to determine, from an array of proposed reproductive health options, what package of services to provide. Programmes will have to expand the range of services offered and at the same time increase access to and improve the quality of existing services. Policy makers must decide on the structure of expanded reproductive health programmes, funding requirements and the sources of funding. These decisions will be difficult, since programmes will require co-ordinated efforts and will compete with other priorities for limited domestic and international funding.

There is no single strategy. A global strategy will need to be translated into various approaches at national and local levels, and simultaneous activities will be needed on a variety of fronts. Nevertheless, there are guiding principles that apply everywhere. The strategies for the attainment of reproductive health, and the prevention and care of RTIs including STDs must be based on the underlying principles of human rights and the operational principles of national ownership, a participatory process involving providers, users and planners in the planning, implementation and evaluation of programmes; and multisectoral action, with partners contributing according to their comparative advantages.

Action

Response to the challenge of reproductive health, including RTIs and STDs, should focus on -

Environment: Establishment of a supportive, enabling environment. This includes a number of actions to change the social, economic, cultural and political environment conducive to better reproductive health and HIV/AIDS and STD programmes. It includes a variety of possible actions. There is a strong need for advocacy to promote interventions and action. Soliciting international community support is needed, including agencies and nongovernmental organisations, to increase resources, develop some common guiding principles and establish collaboration and partnerships for programme implementation.

Advocacy should draw the attention of communities and decision-makers to the issues of reproductive health, RTIs and STDs, and point towards nationally relevant solutions. National advocacy should provide the rationale for greater allocation of national resources.

Health Promotion: Relevant information should be developed, as well as education and communication (IEC) programmes to build knowledge, motivation and skills. IEC programmes need to be developed based on a full understanding of the individual and broader socio-economic factors that influence individual, institutional and group behaviour. They should focus on fostering health and responsible behaviour. IEC could also be used to promote ideas of equality, to increase male responsibility in pregnancy and the prevention of STDs and HIV, and to promote informed reproductive health choices, especially for women. The overall programme should aim to develop individual skills to make informed decisions and to create a demand for timely and quality services.

Health services: Strengthening of health services, improvement of delivery and quality, and establishment of strong linkages across services. These should include *early and prompt management of bacterial STDs:* Bacterial STDs and RTIs are treatable and early case management should be a basic strategy of every programme. Case management is more than giving a pill or an injection. A patient contact for a sexually transmitted disease should provide an opportunity for education about risk reduction and condom use. In most settings, including in the industrialised world, laboratory tests are not available to support a treatment decision on the spot. In addition, current laboratory tests, with the exception of microscopic study and the rapid plasma reagin test, are too technically demanding and expensive for many populations. For these reasons, simple flow charts using syndromic approach are being used increasingly at the primary care level. The development of cheap and simple diagnostic tests should also be high on the research agenda. Functional linkages should be established, coordinating or integrating prevention and care programmes for RTI, STD and HIV into family planning and MCH services including primary prevention of RTIs and STDs through interpersonal counselling at the health facility and community outreach to reach underserved populations and promote supportive environments. Targeted interventions should be introduced for populations at higher risk. The awareness of reproductive health problems, need for care and availability of services in high-risk groups is generally lacking. Health care seeking behaviour needs to be improved. Stigmatisation, economic conditions and various socio-cultural norms impede appropriate health care seeking behaviour, while acceptable and accessible services for diagnosis and treatment may not be available for those who want to seek health care.

Research and development: There are two priority areas: 1. Research to develop appropriate and effective interventions, including operational research. Such research should cover, for instance:

- a) Research on service delivery, such as what the barriers are and how to improve access to service by women and young people; on effective ways of integrating STD services into family planning or primary health care; operational research on improving supplies and storage of drugs, condoms etc.

- b) Research on appropriate communication approaches, such as exposure to different channels of communication, on reach and effectiveness of programmes using various channels, on perceptions and understanding of messages and on effectiveness of peer education or school education curriculum. Policy analysis and research to assess the effect on programmes, such as research on effectiveness of policies and regulations promoting condom use; on health policies etc.
- c) Research on new tools and technologies: Research on new technologies that prevent RTIs and STDs, HIV and pregnancy, and that prevent STDs and HIV without preventing pregnancies (microbicide, virucide, female condoms, new barrier methods etc.); Research on optimal strategies for diagnosis and management of asymptomatic RTIs, including STDs; Development of simple, cost-effective diagnostic tests for RTI and STDs; Operational research to identify new ways of motivating people to adhere to safe and responsible sexual practices; mobilising community networks and support systems to facilitate informed decision making and appropriate use of reproductive health services; and strengthening environments to facilitate responsible sexual behaviour.

It is clear that there is no simple solution for the prevention and care of RTI, STD and AIDS, nor for meeting all reproductive health needs. What is needed is a right combination of approaches, combining prevention and care, and combining medical, behavioural and societal and contextual interventions. Suitable and highly cost-effective interventions are available.

Much creativity and energy is needed to make use of this momentum of opportunities to contain HIV/AIDS and STDs, and to ensure improved sexual and reproductive health for all.

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