

securing OUR FUTURE

**EMBARGOED TILL
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Report of the Commission on HIV/AIDS and Governance in Africa

An initiative of the Secretary-General of the United Nations

*securing
our
future* "



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Preface

Securing Africa's future

By: Kenneth Kaunda, former President of Zambia and Pascoal Mocumbi, former Prime Minister of Mozambique

In 2003, when Secretary-General Kofi Annan asked us to lead a panel of eminent persons to study the impact of the AIDS epidemic on governance in Africa, the picture for Africa was, indeed, grim. About 25.5 million, out of close to 42 million people living with HIV and AIDS in the world lived in Africa. At that time, 13 million people had already died from AIDS in Africa; 2.2 million in 2003 alone. Also, 12 million children had lost at least one parent to AIDS and in 11 African countries, HIV prevalence was greater than 10 percent amongst young pregnant women and more than 20 percent among the same group in five countries in southern Africa. These were the realities that spurred Mr. Annan into initiating the Commission on HIV/AIDS and Governance in Africa (CHGA).

Today, almost five years later, the outlook is less bleak. Global funding has increased to levels unimaginable in 2000. In 2007, global investment in AIDS was \$10 billion, close to half of which was spent in Africa. While five million Africans are still in need of antiretroviral therapy, and will die without it, two million Africans are today receiving life-saving treatment. Many countries are registering a decline in new infection; prevalence is leveling in some countries and falling in many others. African leaders have created National AIDS Councils to coordinate response: in 30 African countries, those bodies are headed by the President, Vice President or Prime Minister. Clearly, the political leadership exhibited by African Heads of State, from the African Development Forum on HIV and AIDS, to the "Abuja Declaration on AIDS, TB and Other Infectious Diseases" have contributed to these modest successes.

Despite these modest successes, serious challenges remain for Africa. In some countries, more than 25 percent of the health budget is needed to cover antiretroviral treatment. The result is a dangerous reliance on external funding support. Prevention efforts are not catching up with treatment, despite evidence that both strategies could reduce by seven million, the number of people in need of treatment by 2011. The number of AIDS orphans is on the rise and will compound national budget gaps. HIV infection patterns are continually changing; economic realities are making treatment adherence difficult and resistance to current drugs

are beginning to emerge. Therefore, we must temper the present optimism with a realism built on a comprehensive and enhanced response. This is why this report has come at an opportune time.

Just about the same time that we began the Commission's work, the Economic Commission for Africa, in partnership with the World Bank and the World Health Organization, began the Treatment Acceleration Programme in three African countries –Burkina Faso, Ghana and Mozambique – to better understand what it would take to scale-up treatment in various settings, giving differing prevalence rates and epidemics. Key lessons have been documented which, when taken together with the recommendations in this report, would enhance Africa's regional response to the epidemic.

The fundamental finding of “Securing Our Future” is that while AIDS continues to pose serious challenges to the ability of African States to maintain efficient public institutions and deliver sound policies and promote the rule of law, these challenges can be faced and surmounted through better appreciation of the country-specific epidemic, use of better data for national response good governance and stronger political commitments at all levels of society. It is for this reason that response to AIDS must be at the centre of development strategies.

As part of our work in CHGA, the Commissioners visited countries in every subregion in Africa and listened to thousands of people affected and infected by AIDS during various interactive sessions. The views of these people were crucial as we formulated the policy recommendations in this introspective report.

We have completed our task in CHGA, but the tough task of implementing its various recommendations has just begun. We call on all policy makers, partners and other stakeholders to join in the effort to secure Africa's future.

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Common Terminologies

From *2007 UNAIDS Terminologies*

ABC

Prevention strategies: abstain from penetrative sexual intercourse (also used to indicate delay of sexual debut); be faithful (reduce the number of partners or have sexual relations with only one partner); condomize (use condoms consistently and correctly).

ADVOCATE

As a verb: 'advocate change' (rather than advocate for change).

AIDS CARRIER

This term often is used to mean any person living with HIV. However, it is stigmatizing and offensive to many people living with the virus. It is also incorrect, since the agent being carried is HIV not AIDS.

AIDS or HIV-RELATED ILLNESSES

AIDS is what people die of; HIV is what they are infected with. The expression AIDS-related illness can be used if the person has an AIDS diagnosis.

AIDS RESPONSE

The terms AIDS response, HIV response, response to AIDS and response to HIV are often used interchangeably to mean the response to the epidemic.

ART Spell out in full, i.e. antiretroviral therapy or antiretroviral treatment.

BEHAVIOUR CHANGE (NOT 'Behavioural Change')

There are a number of theories and models of human behaviour that guide health promotion and education efforts to encourage behaviour change, i.e. the adoption and maintenance of healthy behaviours.

COMMERCIAL SEX WORK

Preferred terms are 'commercial sex' and 'the sale of sexual services'.

CONTAMINATED and NON-STERILE

Drug injecting equipment was ‘contaminated’ if it caused infection, that is, the equipment contained virus; ‘unclean’, ‘dirty’ or non-sterile if it carried the risk of HIV exposure: that is, it may or may not have carried the virus.

AIDS

AIDS, the acquired immunodeficiency syndrome, is a fatal disease caused by HIV, the human immunodeficiency virus. HIV destroys the body’s ability to fight off infection and disease, which can ultimately lead to death. Currently, antiretroviral drugs slow down replication of the virus and can greatly enhance quality of life, but they do not eliminate HIV infection.

DRIVER

The term relates to the structural and social factors, such as poverty, gender, and human rights, that are not easily measured and that can increase people’s vulnerability to exposure to HIV. It is often reserved for underlying determinants.

EPIDEMIC

In epidemiology, an epidemic is a disease that appears as new cases in a given human population. Defining an epidemic is subjective, depending in part on what is ‘expected’. An epidemic may be restricted to one locale (an outbreak), more general (an epidemic) or global (a pandemic). Common diseases that occur at a constant but relatively high rate in the population are said to be ‘endemic’. Widely-known examples of epidemics include the plague of mediaeval Europe known as the Black Death, the Influenza Pandemic of 1918-1919, and the current HIV epidemic which is increasingly described as pandemic.

EPIDEMIOLOGY

The branch of medical science that deals with the study of incidence, distribution, determinants of patterns of a disease and its prevention in a population.

EVIDENCE-INFORMED

This term is preferred to evidence-based in recognition of the fact that several elements may play a role in decision making, only one of which may be evidence; others may include cultural appropriateness, cost, feasibility, concerns about equity and so on.

FAITH-BASED ORGANIZATIONS

Faith-based organization is the term preferred instead of e.g. Church, Religious Organization, as it is inclusive (non-judgmental about the validity of any expres-

sion of faith) and moves away from historical (and typically European) patterns of thought.

FEMINIZATION

Referring to the pandemic, feminization is now often used to indicate the increasing impact that the HIV epidemic has on women. It is often linked to the idea that the number of women infected has equalled, or surpassed, the figure for men.

GAY MEN

Refers to ‘men who have sex with men’ unless individuals or groups specifically self-identify as gay.

GENDER and SEX

The term ‘sex’ refers to biologically determined differences, whereas the term ‘gender’ refers to differences in social roles and relations between men and women. Gender roles are learned through socialization and vary widely within and between cultures. Gender roles are also affected by age, class, race, ethnicity and religion, as well as by geographical, economic and political environments. Since many languages do not have the word gender, translators may have to consider other alternatives to distinguish between these concepts.

GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA

The Global Fund to Fight AIDS, Tuberculosis and Malaria, established in 2001, is an independent public-private partnership. It is the largest global fund in the health domain, to date (August 2005) it has committed over US\$ 3 billion in 128 countries. The purpose of the Global Fund is to attract, manage and disburse additional resources to make a sustainable and significant contribution to mitigate the impact caused by HIV, tuberculosis and malaria in countries in need, while contributing to poverty reduction as part of the Millennium Development Goals.

HIGH-RISK GROUPS/POPULATIONS WITH HIGHER-RISK OF EXPOSURE TO HIV

These terms should be used with caution as they can increase stigma and discrimination. They may also lull people who don’t identify with such groups into a false sense of security. ‘High-risk group’ also implies that the risk is contained within the group whereas, in fact, all social groups are interrelated. It is often more accurate to refer directly to ‘higher risk of HIV exposure’, ‘sex without a condom’, ‘unprotected sex’, or ‘using non-sterile injection equipment’ rather than

to generalize by saying 'high-risk group'. Membership of groups does not place individuals at risk, behaviours may. .

HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART)

The name given to treatment regimens recommended by leading HIV experts to aggressively suppress viral replication and slow the progress of HIV disease. The usual HAART regimen combines three or more different drugs such as two nucleoside reverse transcriptase inhibitors and a protease inhibitor, two NRTIs and a non-nucleoside reverse transcriptase inhibitor or other combinations. More recently, a new drug has been developed to prevent the virus from entering the cell.

HIV-RELATED DISEASE

Symptoms of HIV-infection may occur both at the beginning of HIV infection and after immune compromise sets in, leading to AIDS. During the initial infection with HIV, when the virus comes into contact with the mucosal surface, it finds susceptible target cells and moves to lymphoid tissue where massive production of the virus ensues. This leads to a burst of high-level viraemia (virus in the bloodstream) with wide dissemination of the virus. Some people may have flu-like symptoms at this stage but these are generally referred to as symptoms of primary infection rather than HIV-related disease. The resulting immune response to suppress the virus is only partially successful and some virus escapes and may remain undetectable for months to years. Eventually high viral turnover leads to destruction of the immune system, sometimes referred to as advanced HIV infection. HIV disease is, therefore, characterized by a gradual deterioration of immune function. During the course of infection, crucial immune cells, called CD4+ T cells, are disabled and killed, and their numbers progressively decline.

HIV-INFECTED

As distinct from HIV-positive (which can sometimes be a false positive test result, especially in infants of up to 18 months of age), the term HIV-infected is usually used to indicate that evidence of HIV has been found via a blood or tissue test.

HIV-NEGATIVE

Showing no evidence of infection with HIV (e.g. absence of antibodies against HIV) in a blood or tissue test. Synonymous with seronegative. An HIV-negative person can be infected if he or she is in the window period between HIV exposure and detection of antibodies.

HIV-POSITIVE

Showing indications of infection with HIV (e.g. presence of antibodies against HIV) on a test of blood or tissue. Synonymous with seropositive. Test may occasionally show false positive results.

HUMAN IMMUNODEFICIENCY VIRUS (HIV)

The virus that weakens the immune system, ultimately leading to AIDS. Since HIV means 'human immunodeficiency virus', it is redundant to refer to the HIV virus.

HUMAN IMMUNODEFICIENCY VIRUS TYPE _ (HIV-_)

The retrovirus isolated and recognized as the etiologic (i.e., causing or contributing to the cause of a disease) agent of AIDS. HIV-1 is classified as a lentivirus in a subgroup of retroviruses. Most viruses and all bacteria, plants, and animals have genetic codes made up of DNA, which uses RNA to build specific proteins. The genetic material of a retrovirus such as HIV is the RNA itself. HIV inserts its own RNA into the host cell's DNA, preventing the host cell from carrying out its natural functions and turning it into an HIV factory.

HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (HIV-2)

A virus closely related to HIV-1 that has also been found to cause AIDS. It was first isolated in West Africa. Although HIV-1 and HIV-2 are similar in their viral structure, modes of transmission, and resulting opportunistic infections, they have differed in their geographical patterns of infection and in their propensity to progress to illness and death. Compared to HIV-1, HIV-2 is found primarily in West Africa and has a slower, less severe clinical course.

About the Commission

The Commission on HIV/AIDS and Governance in Africa (CHGA) was launched by the Secretary-General of the United Nations to address the urgent and unique challenges posed by the multiple ways in which the HIV/AIDS epidemic impacts upon development and governance on the continent of Africa. The specific mandates of the Commission were twofold: (i) clarify the data on the impact of HIV/AIDS on state structures and economic development; and (ii) assist governments to consolidate the design and implementation of policies and programmes that can help to govern the epidemic.

This report is the culmination of a unique consultation by CHGA Commissioners with a wide constituency in Africa and beyond. The findings and recommendations not only embody deep original analytical insights derived from the Commission own research, they also reflect the views of the more than 1,000 Africans—including policymakers, advocacy groups, nongovernmental organizations, community-based organizations, people with HIV/AIDS and research organizations and UN agencies—who took part in the consultation process.

The Commission examined policy options in the response to HIV/AIDS at the grassroots level. During its lifespan it held five subregional consultations. These consultations provided an opportunity for the Commissioners to engage with a wide range of stakeholders and constituencies. Each interactive session provided an opportunity for a wide range of stakeholders and constituents to share experiences and discuss the way forward in their subregional context and to identify key messages to underpin the Commission's advocacy work, which reflects the views of the more than 1,000 people drawn from the continent.

Commission members

Chairman

K.Y. Amoako*

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Kenneth Kaunda and Pascoal Mocumbi

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* K.Y. Amoako, UN Under-Secretary General and Executive Secretary of ECA chaired the work of the Commission from 2003-2005.

Commissioners' statement

We have been charged with analyzing the HIV/AIDS pandemic's implications for governance in Africa and making recommendations based on that analysis. We are now pleased to present our report to the UN Secretary-General, with deep appreciation for his request that we work on this important topic. We are also glad to have the opportunity to present this report to the global community. The lessons we learned are pertinent not just to Africa but to other parts of the world suffering from the pandemic as well. They are relevant too for those parts of the world where the pandemic has yet to be felt.

We define governance as the ability of the state to maintain efficient public institutions, produce and deliver sound policies, promote the rule of law, sustain livelihoods and provide an enabling environment for public, private and civil society. Our findings and recommendations embody analytical insights derived from the Commission's own research and evidence drawn from other studies and sources. They reflect the views of more than a thousand Africans, including policymakers, advocacy groups, nongovernmental organizations, community-based organizations, people living with HIV/AIDS, research organizations and UN agencies—all of whom took part in an extensive consultation process over two years.

AIDS is a serious threat to governance in Africa

Our overall conclusion is that the epidemic poses a great threat to governance in Africa. In many parts of the continent the impact of AIDS already has significant consequences for all forms of social, economic and political activity and thus for governance in the years to come. The disease exploits and exacerbates existing social and economic disparities in society and threatens the ability of nations to improve the well-being of their citizens, build strong and stable societies and expand opportunities for all. Women, children and men who live in poverty are finding their conditions even more difficult and their chances of contracting the virus even higher.

In some of the heavily affected countries we find that the combination of the brain drain and the epidemic is eroding institutional robustness, reshaping governmental structures and restructuring state-society relations.

We see the impact of the epidemic to be most evident in the deterioration of social welfare indicators—such as life expectancy, literacy and primary school enrolment. Before the epidemic these indicators had been improving for decades. But AIDS is reducing capacity in all social and economic sectors. This is the result of the mortality and morbidity of highly skilled and experienced people, who can be replaced only after long periods of training and skills acquisition. General levels of education are falling, as enrolments of AIDS orphans decline. We conclude that HIV and AIDS have reduced the educated and professional cadres' ability to pass on their accumulated knowledge and expertise to succeeding generations. As a result, younger and less experienced workers find it harder to acquire the specialized skills, expertise and professionalism needed for their jobs. In the longer term fewer experienced officials will be available to train younger personnel in key formal skills or to pass on more informal standard operating procedures or norms such as ministerial accountability, bureaucratic neutrality, official ethics and institutional transparency.

Of great concern to us is the fact that the epidemic has led in some hard-hit communities to a retreat into subsistence production in agriculture and hurt service delivery. By 2020 the nine most severely hit Sub-Saharan countries may lose 13%–26% of their agricultural labour force to AIDS. Those dying are more than agricultural workers. They are household heads, mothers and fathers of young children and adolescents, caregivers for the old and sick, transmitters of agricultural and livelihood knowledge and skills and custodians of social safety nets.

While the epidemic's effect on GDP is not immediately clear, compromised rural livelihoods due to declining life expectancy are expected to reduce output, compounded by the reduced productivity associated with increased prevalences of ill health and shortages of critical skills. The GDP in countries with HIV prevalence rates of 10% or higher could contract by 18% by 2020. We are alarmed that the risk of infection is growing, especially among young women and girls, who are twice as likely to be infected with HIV, and that the dynamics of gender and AIDS exacerbate women's vulnerability to contracting the virus, coping with the disease and caring for others.

The social customs of adoption and fostering, however well established in Africa, are proving insufficient to cope with the burgeoning orphan problem.

Finally, we have found that AIDS is already undermining the pillars of democracy in high-prevalence countries. The sickness and death of members of parliament could throw into question the legitimacy of democratic representation. The reduction in state capacity is hampering policy implementation, and popular political opinion is being shaped by perceptions of leaders' ability to prevent and mitigate the impact of the epidemic. In many African countries, the losses of human capacity are likely to reduce states' ability to protect and provide for their citizens, with ramifications for both political legitimacy and stability in the years

to come. From our evidence-based findings we have developed a Plan of Action for the next generation of interventions strategies—either as integrated steps towards a comprehensive policy for fighting HIV/AIDS or as standalone options for strengthening policy and programmatic response in four broad areas:

- Reinvigorating prevention strategies.
- Developing national plans of action for providing treatment and care.
- Improving fiscal governance by African governments.
- Improving the sustainability and coordination of funding by creating a new donor framework.

While each country will need its own plan, our recommendations are intended to indicate the kinds of actions that should commence, if they are not already under way.

We consider the African Development Forum of the Economic Commission for Africa held in December 2000 to be the watershed moment in terms of awareness of the pandemic's impact. The consensus statement from the forum applauded the new willingness of African leaders to speak frankly and act more forcefully to prevent HIV and AIDS from spreading. It identified leadership actions needed at the personal, community, national, regional and international levels.

Since the call for leadership at the 2000 African Development Forum, some tangible progress has been made in the fight against HIV and AIDS in Africa. At the national level almost all countries now have multisectoral strategic plans for HIV and AIDS in place. These plans generally are led by a central national coordinating body empowered to promote prevention activities across government agencies and to coordinate the work of state and non-state actors.

Indeed, sound progress is being made by some African countries on several fronts. In particular, some national programmes are beginning to see positive results, especially in preventing HIV infection among youth. And significant progress has been made at the international level to increase resources, through institutions such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and other multilateral and bilateral programs.

But eight years after the African Development Forum 14 million more Africans have died of AIDS, and additional 17 million have been infected. And the number of orphans has increased from 8.5 million in 2000 to around 14 million in 2006. Our report shows that in many countries, especially in Southern African, more challenges are anticipated with girls and women bearing the brunt of the epidemic's devastation and an ever-increasing orphan problem. We are aware that the disease has already had significant consequences on social, economic and political activities, and we have concluded that HIV and AIDS will have

dire implications for governance for years to come unless decisive actions deepen the commitment and leadership in the fight against the pandemic. This includes leadership in all areas: governments, donors, civil society leaders, traditional and community leaders and people living with HIV and AIDS.

Key messages and recommendations

This report is intended for many audiences: decision makers in Africa, civil society leaders, nongovernmental organizations, business leaders, people living with HIV and AIDS, donor governments, and organizations and key leaders in the international community, including the United Nations. From the findings, recommendations and action plan contained in this report, we have distilled eight key messages followed by appropriate recommendations:

Key Message 1: There are multiple AIDS epidemics in Africa

There are multiple African AIDS epidemics with varied levels of adult prevalence and internal conditions for each country. This implies that no one specific solution can address the issues that fuel the course of the epidemics in a given setting. While broad patterns in the AIDS pandemic are discernible, the particular social, economic and political structures within localities need to be carefully understood to achieve effective prevention and mitigation programmes.

Recommendations:

- Encourage use of the best available data to know and understand the particular epidemic in varied settings.
- Design national response based on the country-specific knowledge of the epidemic.

Key Message 2: The epidemics in Africa reflect a strong gender disparity

There is a strong relationship between gender inequality, the subordination of women and girls in society, and extreme vulnerability of women to HIV infections and consequences of AIDS. Communities, supported by appropriate government legislation, should therefore address issues related to the low status of women and girls, violation of their human rights and the transmission of HIV.

Recommendations:

- Some cultural norms, behaviors and traditions increase the risk of infection and need to be better understood and changed.
- Understand and articulate gender in terms of power relations between men and women; identify the strengths in African cultures that are important in HIV/AIDS prevention and care and; change harmful social and cultural practices.
- Enforce laws to eliminate violence against women and girls.
- Provide earmarked funds that will assist governments in revising legislation to ensure the protection of the rights of women and children.

Key Message 3: The growing number of children infected and affected by HIV presents a challenge.

The number of children infected and affected by AIDS will increase in the coming years. Recent estimates indicate that there will be 50 million orphans in Africa by 2010, 37% of whom will be AIDS orphans. The increased number of AIDS orphans may add to the stigma, and require special needs, which if not met, will be catastrophic for the children and for Africa's development.

Recommendations:

- Support Institutions in providing adequate medical care to orphans.
- Strengthen and facilitate community support for orphans and families as a means of ensuring their integration into mainstream society.

Key Message 4: Prevention must remain priority

While recognizing positive trends in treatment, a sense of urgency must be brought to HIV prevention, to re-emphasize it as a priority for leaders, donors and grassroots workers. More than two decades of experience have shown that effective HIV prevention requires a combination of tools that address the various routes of infection and enable those at risk to make use of them.

Recommendations:

- Sustain prevention targeted messages about HIV transmission and stigma including health care settings and vulnerable populations.
- Provide access to HIV testing and counseling, treatment of sexually transmitted diseases and prevention of mother to child transmission services.

- Distribute technical means of prevention such as male and female condoms.
- Integrate treatment with prevention strategies.

Key Message 5: Inadequate human resources constrains treatment and care

The key challenge in effectively scaling up HIV treatment and strengthening African health care systems is the lack of human and financial resources. Understaffed and underfinanced health care systems whether as a result of brain drain or sick staff, cannot provide the incentives for skilled health care professionals to remain in public health care structures. This creates a vicious circle of increased work load deteriorated working conditions for those who remain.

Recommendations:

- Provide better conditions of service to motivate health care workers to perform and stay longer in their varied capacities.
- Re-think through existing forms and models of health service delivery, not in the context of antiretroviral therapy provision, but also in the content of declining human resources capacity within the health sector in general.
- Build the capacity of existing health care workers.
- Prioritize the treatment of infected health care workers.
- Adopt task shifting as a temporary response to human resource constraints.

Key Message 6: AIDS financing needs to be coordinated, predictable, long term and transparent

Scaling up the HIV/AIDS response requires additional funding to finance recurrent costs (personnel) and local goods and services. In addition we endorse efforts to improve the delivery of aid by harmonizing donor practices and aligning assistance with the development priorities of governments in order to reduce transaction costs articulated in Rome and more recently in the Paris Declaration on development effectiveness.

Recommendations:

- African governments should improve their public expenditure management to meet minimum performance standards including, fiduciary standards.
- Align donor assistance with national policies and priorities so that funding supports country-owned AIDS strategies that are fully integrated within the national development strategies.

- Analyze the need for integrating a comprehensive financing strategy into multisectoral plans.
- Improve budgetary systems and account to national constituencies in order to increase donor confidence that aid will be effectively used and accounted for.

Key Message 7: Leadership at all levels needs to be reinvigorated and sustained as part of a coordinated response

Recommendations:

- Commit national resources to the response and link the response to the broader development planning effort.
- Institute an enabling environment where citizens at all levels understand their role in the national response to HIV and AIDS and actively play the role.
- Implement regional and international commitments such as the Abuja Declaration and other related HIV and AIDS by translating them into national plans of action.

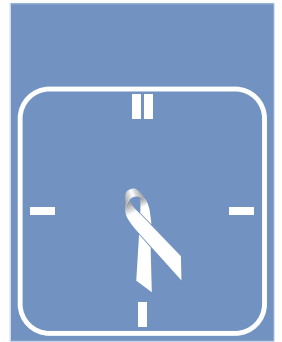
Key Message 8: The ultimate goal of good governance should be the creation of an enabling environment in which every citizen becomes part of the national AIDS response and the state is able to maintain efficient public institutions.

The long term goals of reversing the spread of HIV and providing care and support to millions of people infected and affected by the epidemic cannot be achieved without stronger public sector performance and a responsive governance regime.

Recommendations:

- Institute policies which put appropriate stakeholders, including persons infected and affected by AIDS at the centre of national response.
- Provide social protection mechanisms such as disability and chronic illness grants and emergency relief assistance as essential mechanisms of poverty alleviation.
- Create more fiscal space for African countries to ensure effective and timely absorption of grants.

- Africa's electoral commissions should encourage research as a basis for future work in their response to the challenges of HIV and AIDS.



1. HIV and AIDS

the issues for Africa

Chapter at a glance

Between one in twenty and one in ten Africans aged 15-49 is HIV-positive, and more than 20 million Africans have already died as a result of the epidemic. There is, however, not one, single HIV epidemic in Africa. Across the continent HIV shows a great geographical variance. Countries in southern Africa form the epicentre of the global pandemic. South Africa counts more than one thousand new infections a day, the highest in the world, while in Botswana, Lesotho, Namibia, Swaziland and Zimbabwe at least one in five adults carries HIV. These are “hyperendemic” countries according to UNAIDS classification. By contrast, the general rates of infection in western Africa have been consistently lower, with countries registering between 1% and 7% prevalence rates among adults. These are still generalised epidemics, with concentrated foci among certain sectors of the population, such as commercial sex workers and their clients. Eastern and central Africa exhibit a mix between these two patterns. North Africa, by contrast, has low HIV prevalence, well under 1%. In 2007 an estimated 1.7 million new HIV infections occurred in the region. Half the newly infected individuals in the region are young people aged 15–24 and a majority of them are women.

The best statistical data available today indicates that around 2000, HIV prevalence in sub-Saharan Africa stabilized, at a level of just over 6% for the entire region. This continental average hides subregional variations. Some cities in eastern and southern Africa display declines in HIV prevalence among pregnant women, while in western and central Africa prevalence has stayed roughly steady at lower levels than in the rest of sub-Saharan Africa. But prevalence is still rising in Mozambique. In southern Africa, high risk is especially evident among young women and girls, who are twice as likely to be infected by HIV, with up to six times the infection rates of their male peers in parts of the region.

The fact that HIV prevalence has stabilised is little cause for solace. Absolute numbers have continued to rise, because of population growth, and important downstream impacts of HIV and AIDS such as orphaning will continue to rise for some years to come. The HIV/AIDS epidemic is a long wave event that unfolds over many decades.

Africa’s HIV/AIDS epidemics have many drivers on different levels: biological, personal-behavioural, community and society. A lack of economic opportunity fuels migration and disrupts families. Labour markets, particularly in southern

Africa, are structured such that spouses are separated for months at a time. Economic need drives women to engage in transactional sex and to enter or remain in relationships often associated with sexual violence. Intergenerational sexual relations between younger women and older men, one factor fuelling the epidemic, have become an acceptable social norm, exacerbated by female poverty.

In the absence of effective interventions, HIV infection develops into illness and death in about ten or eleven years. The catastrophic demographic impact of AIDS can be seen in measures of life expectancy, which in some African countries have declined to levels not seen since the middle of the twentieth century—forty years or less. Across Africa HIV and AIDS are eroding vital human resources in all sectors and at all levels. The virus is hitting the most productive sectors of African economies—prime-aged adults—robbing already besieged economies of scarce skills, children of their parents and the continent of a generation. Even with the stabilization of prevalence levels, the time delay between infection, illness and eventually death means that the worst of the pandemic's impact has yet to unfold.

Introduction

Sub-Saharan Africa remains the most affected region in the global AIDS epidemic. More than two-thirds (68%) of all people infected with HIV live in this region and more than three quarters (77%) of all AIDS deaths in 2007 occurred there. It is estimated that 1.7 million [upper and lower ranges: 1.5 million-2.0 million] people were newly infected with HIV in 2007, bringing to 22.5 million [20.9 million-24.3 million] the total number of people living with the virus. This represents 6.1% of the adult population. Unlike other regions, the majority of people with HIV in sub-Saharan Africa are women, accounting for 61% of those living with HIV and AIDS.

There are multiple AIDS epidemics in Africa. Indeed, the continent is the site of a number of different epidemics, each of them with its own epidemiological and social characteristics and variations. The overwhelming majority of those infected are living with the HIV-1 virus, with a much smaller HIV-2 epidemic in parts of west Africa. This chapter presents Africa's epidemics subregion-by-subregion, beginning with Southern Africa, where HIV prevalence is exceptionally high. Under UNAIDS classification, HIV is "hyperendemic" in this subregion.

Current data indicate that HIV prevalence in Africa has stabilized overall, though there are important variations according to country. With the better-quality data now available based on population surveys, we know that HIV prevalence in the general population is somewhat lower than previously thought, and that HIV incidence (new infections) began to stabilise and decline in the late 1990s, with prevalence (overall number of infected people) stabilising and beginning a decline at approximately the turn of the Millennium. Though lower than before by between 25-40%, these figures remain absolutely shocking and are no cause for complacency. Moreover, the epidemic of HIV and AIDS is a long wave event. Mortality from AIDS has continued to rise even after incidence has peaked, and is only now beginning to fall. Some countries are also experiencing a late increase in HIV prevalence. Examples include Mozambique and Uganda, the latter case following previous substantial declines.

This report is concerned with the impacts of the epidemic of HIV and AIDS on society. These impacts remain profound. In many southern African countries, one adult in six is HIV-positive, and the likelihood of a 15-year-old woman dying before the end of her reproductive years has risen from around 11% in the early

1980s to more than 30% today. Life expectancy has declined by 10–30 years over the same period. As a result of these demographic changes, there are fewer people in the 20- to 50-year-old age groups to attend to social reproduction and contribute to the management of national affairs, whether in government, business, religious or social life (box 1.1).

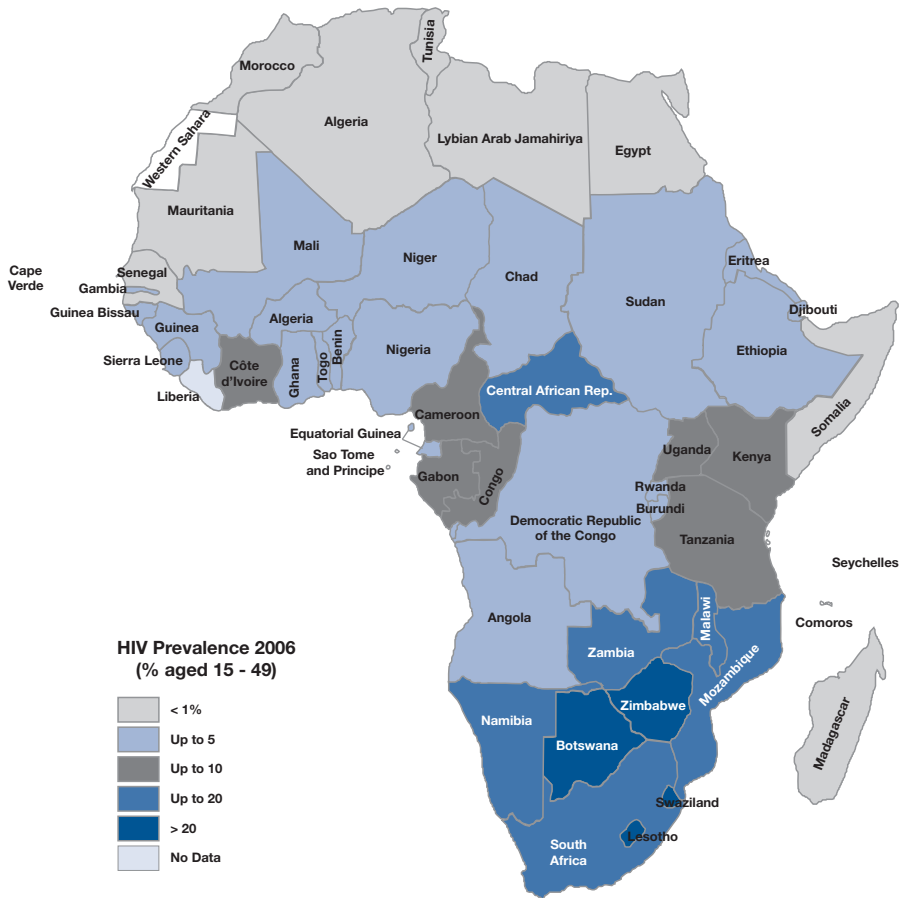
Infection rates capture only part of the crisis. Well over 100 million people in sub-Saharan Africa are affected by the infection, incapacitation or death of a family member from HIV and AIDS. We must add to this number those who are less immediately impacted in extended families, colleagues at work, close friends in faith and other communities, but who nonetheless are deeply affected by the death of a friend or mentor. Possibly half of Africa's entire population feels the effects of the epidemic directly.

Box 1.1

Demographic consequences of HIV/AIDS in Sub-Saharan Africa

- *Radical increase in mortality.* More than 20 million Africans have died, and by 2025, population sizes in southern Africa are expected to be 20%–30% smaller than they would have been in the absence of AIDS. In Botswana and Zimbabwe the population increase is less than 1% a year. Mortality among women of reproductive age is predicted to increase from 11% in 1980 to 40% in 2010 (UN DESA 2007).
- *Decrease in life expectancy.* The average life expectancy in sub-Saharan Africa has fallen from 62 years in 1990–1995 to 48 years in 2000–2005, and in six countries it is less than 40 years (Botswana, Central African Republic, Lesotho, Swaziland, Zambia and Zimbabwe).
- *Disproportionate impact on women.* More than 60% of people living with HIV and AIDS in Sub-Saharan Africa are women. The prevalence is highest for young women (ages 15–24), who also experience greater gender bias in schools, jobs, wages and access to health care.
- *More orphans.* Africa has seen a 13-fold increase in the number of children who have lost one or other parent to AIDS since 1990—to 12 million children orphaned by AIDS in 2007.

Figure 1.1
Estimated adult HIV prevalence, African countries



Data source: UNAIDS/WHO/HUMAN DEVELOPMENT REPORT 2006

The demographic impacts

Data on HIV prevalence indicate that Africa’s HIV and AIDS epidemic followed a sharp upward curve in the 1990s, followed by stabilization and small declines. The timing and pattern of these declines varies from country to country and there are some that have bucked the trend. But caution is in order. The epidemic grew very fast but is fading extremely slowly—HIV prevalence in sub-Saharan Africa remains far higher than anywhere else in the world. Second, the absolute number of people living with HIV and AIDS is still increasing. This is due in part to population growth offsetting the small declines in prevalence and partly due to the availability of treatment which prolongs the lives of people living with HIV



More than three quarters of all AIDS deaths globally in 2007 occurred in sub-Saharan Africa.



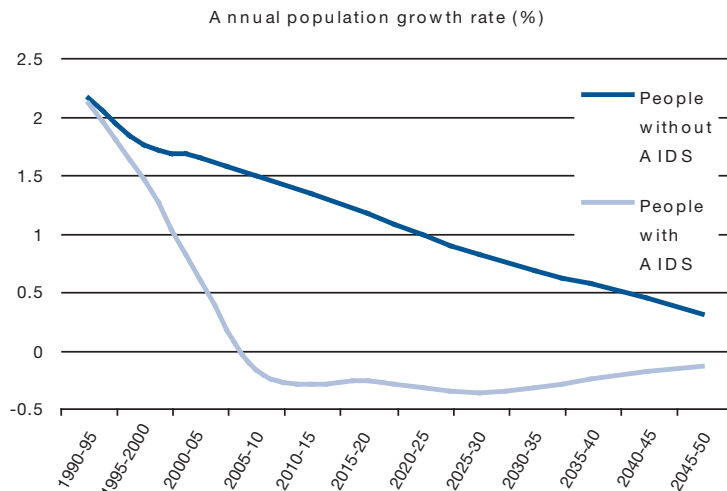
and AIDS. In turn this means that the numbers of people falling sick with AIDS-related illnesses and dying from them is still rising. Third, conditions that favour the spread of HIV remain and the epidemic had the potential for a rebound. But the final reason is the most important. The impact of HIV and AIDS, in terms of numbers of adult deaths, numbers of children orphaned, and the other impacts of the loss of human capital on society and the economy, will continue to increase. In most parts of the continent the full impact of AIDS will continue to be felt in the coming decades.

In countries with high national HIV prevalence significant demographic changes are occurring. These effects include radical increases in mortality, declines in life expectancy, disproportionate impacts on women and fundamental changes in household structures. Most of the evidence for demographic changes comes from southern Africa, where the epidemics have been most intense and efforts to understand the consequences most focused.

More Africans are dying and at younger ages because of HIV/AIDS

HIV and AIDS slow population growth rates more sharply than otherwise (figure 1.2). Some countries in the region are projected to experience near-zero population growth in a few years (figure 1.3) (earlier projections of population decline have been revised). And by 2015 the populations of Botswana, Lesotho, South Africa, Swaziland and Zimbabwe will be stagnant because deaths—largely due to AIDS—almost match births.

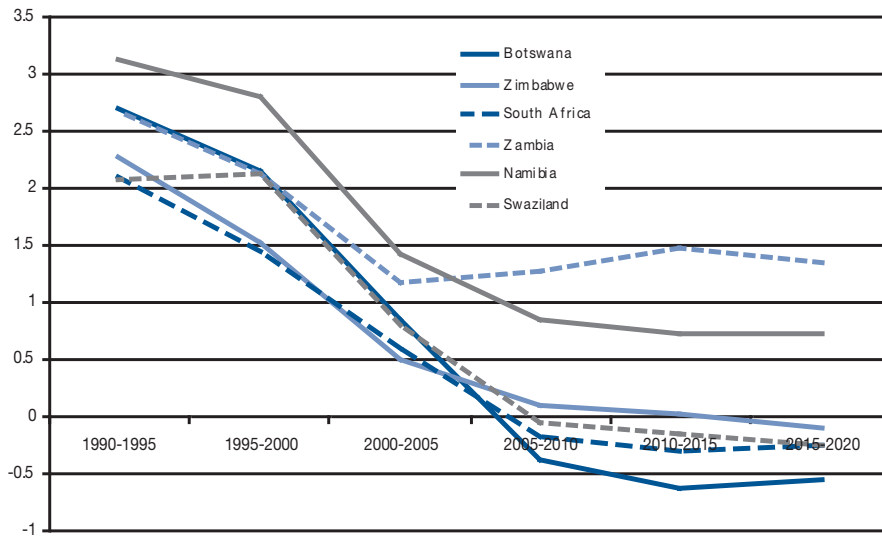
Figure 1.2
AIDS drives down population growth rates in South Africa.



Data source: UN DESA/Population Division 2005b.

In South Africa AIDS accounted for 30%–40% of all adult deaths in 2003–04, up from 10% in 1999–2000. AIDS-related deaths are occurring especially among young and adults ages 24–50 (figure 1.13). Women tend to die in the younger age brackets (ages 20–35), men in the older (ages 30–45).

Figure 1.3
Population growth rates will approach zero for some southern African countries. (Projected annual population growth rate (%))



Data source: UN DESA/Population Division 2005a.

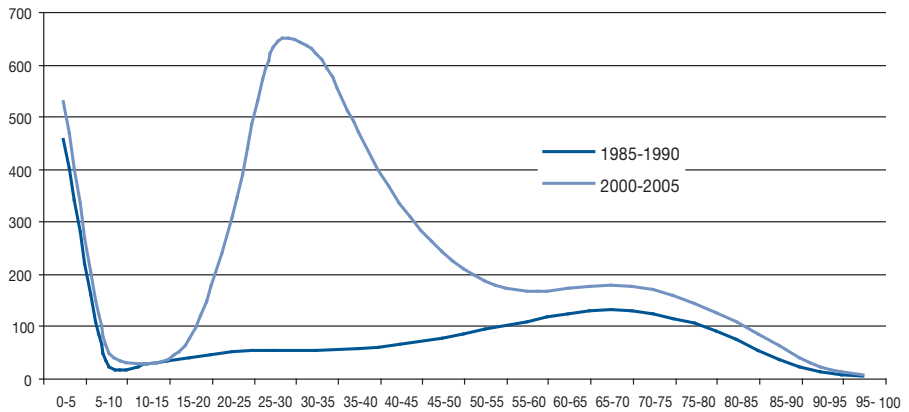
Children, too, are dying at a higher rate, acquiring HIV before they are born or shortly thereafter, and not having the expected care as parents are sick or dead. In Cameroon in 1990-1995 infant mortality was 82 deaths per 1,000 live births—in 2000-2005, 88. In Kenya in 1990-1995 infant mortality was 64 deaths per 1,000 live births—in 2000-2005, 69. Without AIDS infant mortality would have continued to decline in both countries (UN DESA/Population Division 2005b). Under-five mortality is also higher than otherwise in Zimbabwe, the 114 deaths per 1,000 live births in 2000–05 is more than twice the 54 it would have been without AIDS (UN DESA/Population Division 2005a).

“
 In most parts
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 impacts of AIDS
 will be felt in the
 coming decades
 ”

“ Without appropriate treatment, more than 400,000 African infants infected with HIV yearly, will leave for a short time, usually less than three years ”

Figure 1.4
Young and middle-aged adults are the most affected

Number of deaths by age group in Botswana, Lesotho, Namibia, South Africa and Swaziland (thousands)



Data source: UN DESA/Population Division 2005b.

More than 400,000 African infants become infected with HIV each year. Without appropriate drug treatment, the vast majority of them live only a short time, usually less than three years. An estimated 2 million children are living with HIV and about 350,000 died during 2007. Even when children are protected from infection, their parents are unlikely to receive effective treatment to survive, leaving the children orphaned.

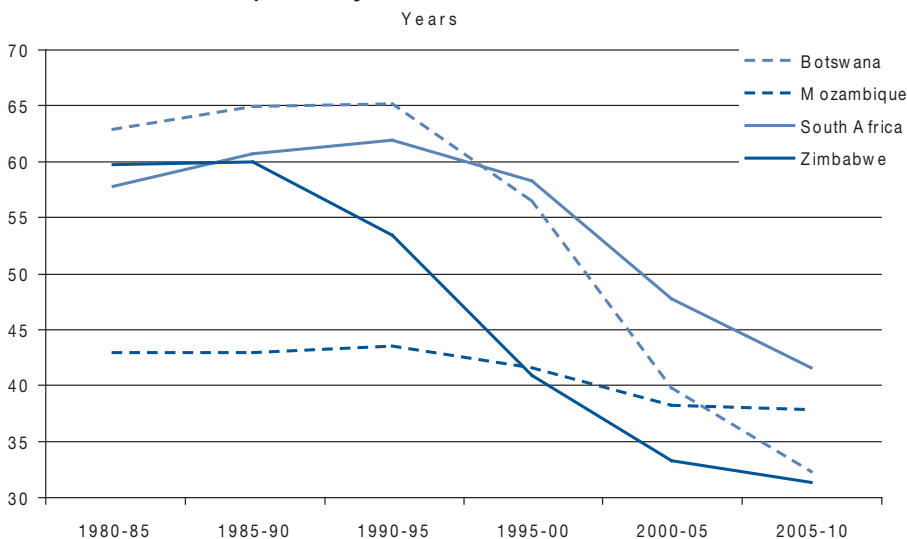
Illnesses and deaths of adults reduce households' ability to provide for themselves. Dependency ratios increase, with fewer adults alive to care for children and the elderly. Older members of extended families assume a greater role in caring for and supporting remaining family members. The loss of an adult man can leave the remaining women and children with fewer economic opportunities and less control over land and equipment. The loss of an adult woman may result in increased malnutrition and generally less care for her children.

Africans are dying at younger ages due to AIDS

As infants and young adults die at higher rates, improvements in national life expectancy stall or are reversed (figure 1.14). Today, the average life expectancy in sub-Saharan Africa is 48 years, down from 62 years in 1990-1995. In 2000-2005 Swaziland's life expectancy was 33 years, not the 64 it would have been without AIDS. Botswana, Central African Republic, Lesotho, Malawi, Swaziland, Zambia and Zimbabwe all have life expectancies below 40 years. Each of the

seven would have had an estimated life expectancy of 53 years or more without AIDS (UN DESA/Population Division 2005b). In Botswana life expectancy has dropped to a level not seen since before 1950.

Figure 1.5
AIDS reduces life expectancy



Data source: UN DESA/Population Division 2003

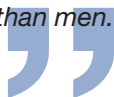
HIV/AIDS affects women more than men.

Women are at higher risk of HIV infection than men. Nearly 60% of people living with HIV/AIDS in Sub-Saharan Africa are women, and the continent accounts for nearly 80% of women living with HIV/AIDS globally (figure 1.6). An even greater gender bias operates against young women ages 15–24—some socioeconomic (in schooling, job access, wage rates and access to preventive and curative health care) and some biological (susceptibility to vaginal infections and abrasions)(figure 1.6). In these younger age groups more than three-quarters of people living with HIV in the worst-affected countries on the continent are women. A study in Kisumu, Kenya, found HIV prevalence greatest in the 15–19 age group (23% and for young women and 3.5% for young men). A 2000 survey in Bobo-Dioulasso, Burkina Faso, showed that infection rates among young girls ages 13–24 were five to eight times higher than among boys the same age (Buvé and others 2001).

Not only are women more likely to become infected—they are more severely affected. Their income is likely to fall if an adult man loses his job and dies.

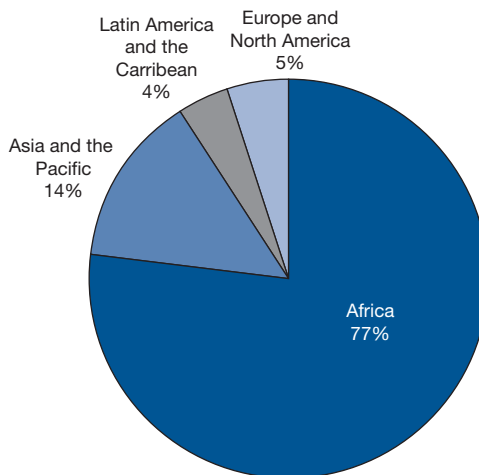


To cope with HIV and AIDS, women face more harm from stigma and discrimination than men.



They may have to give up some income-generating activities or sacrifice schooling to care for sick relatives. Formal support services for them are limited. In eastern Zimbabwe only one-third of the widows of men who had been employed received a widow's pension, and fewer than 2% of affected households received help with school fees, housing costs or subsistence from the social welfare services (Mushati and others 2003).

Figure 1.6
Africa had 77% of the women living with HIV in 2003



Data source: UNAIDS/WHO 2006

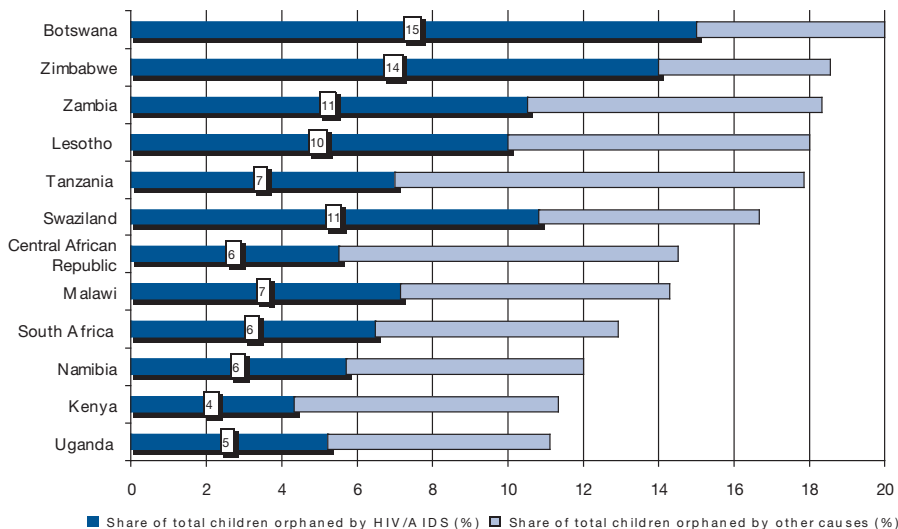
To cope with HIV and AIDS, women face more harm from stigma and discrimination than men, exacerbating obstacles to access to testing, treatment and care. The struggle for gender equality begins in the family, the primary site for stigmatization, discrimination and violence against women. Research confirms that it is not just the sero-status that is key to altering women's lives, but equally (and at times, more) important, their spouse/partner's response to the new crisis in the family (CHGA 2004b). So, many women hesitate to test for HIV and to disclose their HIV-positive status, even to their husbands. Discrimination takes place in the workplace and in communities as well, making it more difficult for women to demand equal treatment and care. However, it should also be noted that, because women access health care facilities more than men, more women have come forward for treatment programmes than men, contrary to expectations. The ABC message (practice abstinence, be faithful, use condoms) promoted in many HIV/AIDS campaigns in some cases intensifies the stigma, as married women with HIV are wrongly accused of engaging in extramarital affairs (see Chapter 3 for more on HIV/AIDS prevention).

The number of orphans has increased

Children are more vulnerable because of the impacts of HIV and AIDS. Social structures are changing as parents die at younger ages and in greater numbers (CHGA 2004d, e). The result is the rapidly increasing number of orphaned children. In 1990 an estimated 841,000 children in Sub-Saharan Africa had been orphaned as a result of one or both parents dying due to HIV/AIDS, in 2005 more than 12 million—a 13-fold increase in 15 years (UNICEF 2006). These numbers are projected to rise before they stabilize. Orphans were generally cared for through traditional mechanisms, such as being absorbed into existing family structures (CHGA 2004d,e). But that safety net is heavily stressed, as extended families and communities face more difficulties in their efforts to care for the growing number of orphaned children. Those extended families are meeting the heavy burden of that obligation. Expectations of a rapid growth in the number of child-headed households have not been fulfilled. But little external support has been provided to foster families to enable them to provide this essential social function (Foster 2005).

“
The number of orphans and the proportion orphaned by AIDS in Africa will increase in the coming years.”

Figure 1.7
AIDS is leaving more orphans



Data source: UNICEF, UNAIDS and USAID 2004

Children orphaned by AIDS account for a growing proportion of the number of orphans from all causes (figure 1.7). But in half the sub-Saharan countries children orphaned by AIDS account for more than 20% of all orphaned children—and in 10, more than 40% (Tadria 2004). Both the number of orphans

and the proportion orphaned by AIDS will increase in the coming years. Recent estimates are that there will be 16 million orphans in Africa in 2010 (UNICEF 2007). These trends have direct implications for intergenerational poverty and pose immense challenges for policymakers (box 1.2)

Box 1.2

Caring for orphans—lessons

- Enhancing the capacity of families and communities to respond to the psychosocial needs of orphans and other vulnerable children is important for protecting children who are HIV-positive or live in households affected by HIV/AIDS—and for ensuring a sustainable future for the children.
- Strengthening the economic coping capacities of families and communities can reduce the vulnerability of orphans to poverty and psychosocial trauma.
- Institutional care can be essential for children who have no close family carers, especially those who are HIV-positive. Community care is important for reducing stigma and providing community education and capacity building.
- Monitoring the status of orphans—whether institutionalized, in foster homes or in child-headed households—is very important for their protection and well-being.

AIDS is changing household structures

As population structures change, so too are the size and composition of households. In some cases households compensate for a death by asking urban-based relatives to return home. The impact of an adult death on the household structure depends on the position of the deceased in the household. In rural Kenya, for example, households shrunk more when an adult woman died—because boys were sent to relatives and girls were fostered or married off. The death of an adult man resulted in a smaller but still significant downward shift in household size (Yamano and Jayne 2004). Widowed men are more likely to remarry than widowed women (Mather and others 2004).

Among the forms of households documented after the death of a prime-aged adult:

- Households headed by elderly people caring for young children.
- Large households comprising unrelated fostered or orphaned children.
- Households in which groups of children are cared for formally or informally by neighbouring adults.
- Households of a single, childless adult woman or man.
- A growing number of households headed by women.

- Child-headed households, with older children (sometimes young adults) caring for siblings.
- Households dissolved with members dispersed.

In Senegal, noted for its low prevalence, the tendency is for household members to disperse before and after the death of a male family head (Niang and Van Ufford 2002). The epidemic is creating a much larger number of female-headed households, often one of the poorest groups in Africa. What is significant about AIDS widows is that they are younger and thus tend to have dependent children who need to be looked after and who cannot contribute to farm work and/or off-farm income-generation activities (Topouzis 2004). Across the continent households are being reconfigured in ways that have long-term implications for livelihoods and for poverty alleviation, national productivity and national development strategies. Government leaders who have assumed that African household systems will absorb the impacts of HIV and AIDS are likely to find that the changes in household structures severely constrain what households can do without additional assistance.

According to survey data synthesised by UNICEF (2006), households caring for orphans have higher dependency ratios than other households, and in surveys in Blantyre, Malawi and 21 districts in Zimbabwe, orphans consistently have fewer basic material goods such as blankets, shoes and two sets of clothing, in comparison with non-orphans.

Core drivers of Africa's HIV and AIDS epidemic

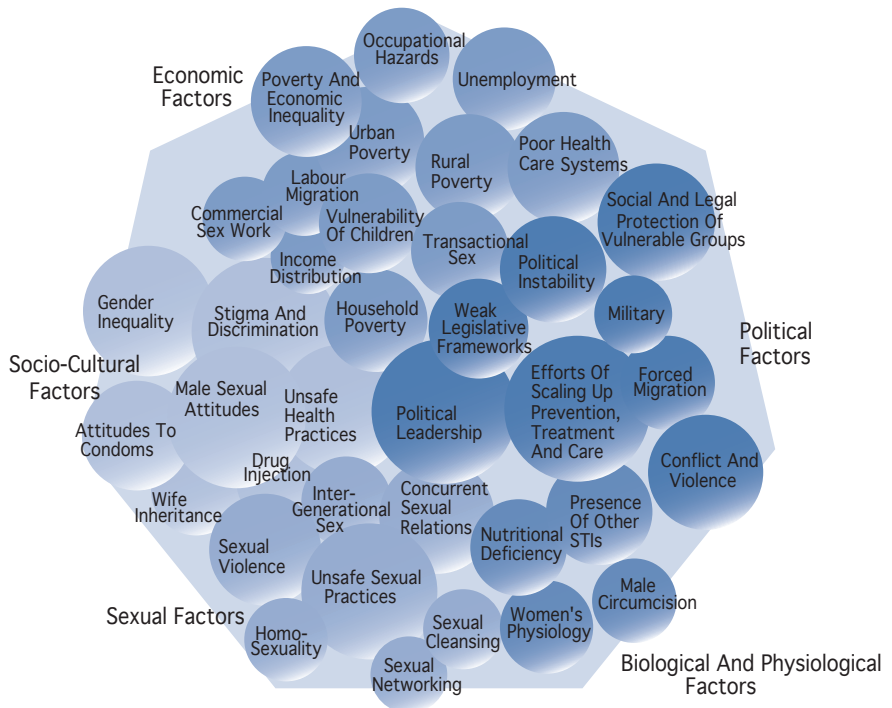
The variations in sub-Saharan Africa's patterns of HIV and AIDS cannot be adequately explained by the different stages at which the virus was introduced into different countries. National HIV prevalence has stayed stable (and, in some cases, at low levels) in several countries with the oldest epidemics, while it exploded in other countries with later epidemic onset. Nor can the differences in prevalence be explained solely by invoking the circulating subtypes of HIV-1 (Morison and others 2001). A favoured explanation for the high prevalence in southern Africa is specific sexual behaviour patterns, namely high levels of concurrent partnerships by both men and women. This explanation has been criticized on the grounds that concurrency is common elsewhere in Africa and outside the continent, in populations that have not experienced such extremely high prevalence of HIV. Taken alone, this factor cannot account for the differences in HIV prevalence in various parts of Sub-Saharan Africa (Craiel 1995), and it is necessary to consider a range of factors interacting with one another (Buvé and others 2001). Those factors include unsafe sex, male circumcision, the presence of other sexually transmitted infections (a medical condition influenced by public awareness,

affordability of and accessibility to diagnosis and treatment), and young age at first sexual intercourse for girls, as well as concurrent partnering (figure 1.8).

Overall, however, the precise reasons for these varying epidemiological patterns in Africa remain poorly understood. Understanding and containing the epidemics—and limiting their impact—require more multidisciplinary research. They also require debate among social scientists, political leaders, business and religious authorities, nongovernmental organization participants and people living with HIV and AIDS. In turn this demands governance skills and leadership—what voices are heard, how resources are allocated—and political leadership, asking the difficult questions, examining and speaking openly about the factors that drive the epidemic and engaging all levels of society in the struggle to deal with it.

This section discusses some of the core drivers of Africa’s AIDS epidemics under four broad headings: biological and physiological, sociocultural, economic and political. Two words of caution, however. First, none of these factors operates alone. Each is linked to others, and all are enmeshed in political, economic and social dynamics and structures. Second, the evidence is quite mixed on the weight of each group of factors in the spread and entrenchment of the epidemics.

Figure 1.8
Many factors are fuelling HIV epidemics



Biological and physiological factors

Women's physiology puts them at greater risk. Women's physiology puts them at greater risk of becoming infected during unprotected vaginal intercourse than men (box 1.3). Girls and young women face an especially high risk of infection during unprotected sex with an HIV-positive man because the lining of the neck of the womb is not fully developed (UNAIDS/WHO 2004). So, where significant numbers of girls and young women are having unsafe sex with men already infected, physiological and sociological factors can combine to increase substantially the likelihood of HIV's spread.

Box 1.3

Basic facts: women and girls

- Women and girls are twice as likely to contract HIV from a single act of unprotected sex.
- Women and girls depend on male cooperation to protect themselves, and they often cannot choose to abstain from sex or insist on condom use.
- Women and girls have less access to prevention messages partly due to lower school enrolment rates, lower literacy levels and lower social and economic power.
- Women and girls bear a greater burden in domestic work and provision of care for sick family members.
- Women and girls may have limited access to care and treatment.

Source: CHGA 2004d.

Other sexually transmitted infections increase the risk of contracting HIV/AIDS. It is likely that high prevalence of herpes simplex virus-2 (HSV-2) ranks among the factors that distinguish the epidemics in southern Africa: infection with either HSV-2 or HIV increases the likelihood of acquiring the other (Weiss, Quigley and Hayes 2000; Del Mar and others 2002). Very high levels of HSV-2 infection have been detected in several high-prevalence countries, including South Africa, Tanzania and Zimbabwe (Hayes and others 1998; McFarland and others 1999; Avert and others 2001; Baeten and others 2005). Underlying the spread of HSV-2 and other sexually transmitted infections is the reality for both men and women that sexually transmitted infections are common but health systems cannot adequately diagnose or treat these diseases. Several studies in Africa have shown that treatment rates for sexually transmitted infections declined after structural adjustment reforms imposed fees for health services.

Male circumcision reduces the risk of contracting HIV/AIDS. Recent evidence—reviewed in detail in Chapter 3—compellingly indicates that male circumcision is a significant protection factor against HIV infection in men.

Sociocultural factors

In Africa, as in other parts of the world, cultural norms and values interact with the AIDS epidemic on many levels and in many different ways. However, in Africa many of the cultural factors influencing the epidemic and response are specific to the continent.

Thus, confronting the epidemic requires an understanding and acknowledgement of these particular cultural determinants and norms. Discussion and action on issues that many societies and communities find uncomfortable continues to be challenging. Sensitive issues include gender inequality, sexual rights and reproductive health, sex work, and sexual orientation. These cultural factors are determinants of the spread of the virus and also create major barriers to access to interventions, undermining the effectiveness of national response to the epidemic.

Culture plays a major role in the following areas of behaviour:

Gender inequalities

Cultural norms increase women's social and economic dependency, limit a woman's ability to negotiate safer sex with her partner, cause early marriage for girls, restrict women's access to information and knowledge about their bodies, cause women to sometimes barter sex for survival, increase women's vulnerability to physical violence including sexual violence; and compromise women's self-esteem. Empowerment of women and girls is fundamental to responding to the epidemic.

Wife inheritance and widow cleansing

Some countries have begun to reform their laws in this area with complementary efforts to engage ethnic and traditional leaders. In 2005, for example, Zambia amended the penal code to make it illegal for any person to engage in harmful cultural practice such as widow cleansing.

Polygamy

Polygamous behaviour has been considered one of the major factors promoting the spread of HIV in Africa, where higher rates of HIV infection often are found in areas with high rates of polygamy. However, the evidence supporting this notion is inconsistent. In Ghana, the prevalence of HIV infection was lowest in the north, where 44% of marriages are polygamous. Polygamy may provide a closed sexual network, with a lower chance of the introduction of HIV.

Domestic violence including marital rape

Married women are at high risk of contracting HIV when cultural norms condone male promiscuity or patriarchal control of the married couple's sexual activities. Women are obliged to have intercourse anytime and under risky conditions: e.g., male spouses having sexual relations with other women, becoming infected with STDs, and demanding sex under the influence of alcohol. Trauma caused by forced sex increases the likelihood of HIV transmission. Some countries have taken the legal decisions against this type of behaviour, e.g. in Zimbabwe, the sexual offences act considers non-consensual sex within marriage as a rape.

Marginalization of some populations

Cultural norms and religious values can fuel discrimination and political and social taboos which allow HIV to take root in society by marginalizing certain populations which are particularly vulnerable to HIV, such as sex workers and men who have sex with men. Cultural norms and religious beliefs which promote social justice, inclusion, and respect for others could be used to a greater extent to help offset discrimination and social exclusion.

The right to own and inherit property

In many cultures, widows have very limited legal rights to claim their family property, which is often confiscated by the husband's family. Besides being a violation of human rights and individual dignity, such traditional practices undermine women's economic security and fuel the vicious cycle of poverty and sexual risk behaviour.

Harmful practices like female genital mutilations

Traditional practices involving female circumcision and mutilation can result in infection during and after the cutting, including HIV infection through sexual

activity prior to the healing of the wounds. In countries such as Mali, Senegal and others, legal measures have been taken to abolish this harmful traditional practice.

Sexual practices

Some sexual practices and preferences, such as older men seeking younger women and girls, or the practice in some cultures of having dry sex, contribute to HIV vulnerability.

At the same time that cultural norms and practices can fuel HIV transmission and impede access to prevention interventions, it should be acknowledged that some traditional practices can have a positive impact as part of the response to AIDS. For example male circumcision, which has been practiced for centuries in some cultures and communities, has been found to decrease the risk of HIV transmission in men.

Thus, while cultural norms and values are important factors that must be understood and addressed in the response to AIDS, our analysis of these dynamics must be specific and nuanced to be effective.

In the following paragraphs, we address some of these social factors with greater specificity, taking direct cues from many interactive sessions that CHGA held in some African countries

Male sexual norms and attitudes are driving the epidemic

“In our societies, men have a ‘cultural license’ to demand sex, unprotected, at any time, and the woman can not say no, even if she knows he’s infected. This has to change.” Participant, CHGA Interactive: Botswana

Male sexual norms, attitudes and behaviours towards many women are some of the strongest factors driving the epidemic. Many men use their greater status, incomes and access to other resources to buy, coerce or exchange sex from women and girls. In turn, men justify their behaviours on the basis of cultural and social values that encourage having multiple sexual partners. Women married to or in long-term relationships with men who have multiple sex partners may become HIV-infected through their partner’s behaviour, over which they wield little if any control. As the HIV/AIDS epidemic matures, an increasing number of HIV infections occur between discordant couples, usually when an HIV positive man infects his wife, who has no other sexual partner. For many women, marriage and fidelity are no protection against HIV.

Concurrent sexual relations increase the risk of contracting HIV/AIDS

“In our polygamous societies, it is accepted that men have multiple partners, while women have to be faithful to one.” Participant, CHGA Interactive: Ethiopia.

Evidence from Côte d’Ivoire, Kenya, Lesotho, Tanzania and Zambia shows that the chances of HIV increases considerably when men or women have unprotected sex with concurrent multiple sexual partnerships within a short space of one another (concurrent partners) (Cohen 2004). This is due partly to the fact that viral load of HIV (and therefore infectivity) is highest in the weeks immediately following infection, which also increases the likelihood that anyone else in that person’s sexual network at the time will be infected (Halperin and Epstein 2004). Indeed, one study has calculated that more than half the heterosexually transmitted HIV infections from men to women in Sub-Saharan Africa occur in the first six weeks of the man’s infection (Pilcher and others 2004). In southern and eastern Africa multiple partnerships, it seems, carry greater likelihood of infection for young women than for young men, even where young men report more such partnerships than do young women (Glynn and others 2001).

Gender relations enforce the vulnerability of women to HIV/AIDS

“Women trust their male partners, although men are the ones who bring HIV into the house.” Participant, CHGA Interactive: Cameroon.

The gendered contours of HIV risks are profound. Women and girls, in particular, encounter numerous HIV-related risk factors that stem not from individual choice but that are imbedded in the social relations and material realities of their societies. In some countries early marriage for girls and young women to older men carries a considerable risk of HIV infection (Pisani 2003). Older men are more likely to have been exposed to HIV, the more so in countries with high HIV prevalence. In Kisumu, Kenya, among women three years or less younger than their husbands, none was found to be infected with HIV, but half the women 10 years or more younger than their husbands were HIV-positive (Glynn and others 2001). Likewise, a girl who at a young age engages in transactional sex with an older man, may contract HIV and thus when she marries a man who is only slightly older than her, may infect him.

Transactional sex is a major factor in HIV transmission

“I believe that if you empower women economically, it would have more effect than more sensitisation and awareness. Economically empowered women are better able to negotiate with their partners, and don’t have to turn to transactional sex.” Participant, CHGA Interactive: Cameroon.

Transactional sex involves nonmarital sexual relationships in which a man provides cash, gifts or favours in exchange for sex. For women such relationships are often with an older male partner (or sometimes with more than one partner) and can last for months or years. For many women, such relationships are ways to survive in otherwise difficult circumstances, but they can also be an opportunity to gain material goods, access to a job or education or a sense of security that would otherwise be unavailable to them (UNAIDS 2004b; Longfield and others 2004). Driven by poverty and the desire for a better life, many women and girls find themselves using sex as a commodity in exchange for goods, services, money, accommodation or other basic necessities (Gregson and others 2002; Luke and Kurz 2002). Indeed, studies have found relatively high proportions of women reporting that they have accepted money, goods or services in exchange for sex. Transactional sex thus simultaneously reflects men's generally superior economic position and access to resources. Particularly in urban areas, these relationships are formed amid aggressively propagated cultures of consumerism and extreme juxtapositions of abundance and deprivation. Sexuality, survival and consumption have become closely intertwined (Delius and Walker 2002).

Usually, it is older men who command the income or resources to transact sex. Not only are they more likely to be infected by HIV, but the inequality and dependencies built into such relationships severely curtail women's abilities to protect themselves from HIV infection (Gregson and others 2002). In high-prevalence settings young women in such relationships therefore face a strong likelihood of acquiring and transmitting HIV infections.

Sex work contributes to the HIV epidemic

“Our girls move to the cities thinking they will have a better life and more opportunities there, but often find themselves having to sell their bodies just to survive.” Participant, CHGA Interactive: Cameroon.

Commercial sex work arises from and reinforces a range of inequalities. Commercial sexual relations have long been recognized as a driving force of the HIV and AIDS epidemics. Even when national HIV prevalence is relatively low, HIV infection levels can be very high among women who sell sex. In Ghana adult national HIV prevalence stood at a little over 3% in 2003. In the capital, Accra, it ranged from 15% for men buying sex from mobile sex workers to 32% for the boyfriends of sex workers (Coté and others 2004). In 1989 as many as two-thirds of new HIV infections in Kenya were estimated to be among sex workers and their clients—and as late as 1998 approximately 45% of new infections were still attributable to sex work (Pisani and others 2003). Surveys in urban parts of other countries between 1998 and 2002 have detected extraordinarily high rates of infection among sex workers—74% in Ethiopia and 50% in South Africa—

confirming that even in high-prevalence countries sex work remains a significant factor in the epidemics (UNAIDS 2002).

Age-mixing increases the vulnerability of young girls to HIV

“Young girls have older partners who can provide them with material things they otherwise would not have access to, while the men falsely believe that young women are less likely to be HIV-positive.” Participant, CHGA Interactive: African Development Forum, Ethiopia.

Age-mixing typically occurs between older men and young women, putting the latter at greater risk of HIV infection. UNAIDS (2000) reports that young African women and girls are having sex at much earlier ages than previously.

There are several reasons for this state of affairs. A major one is that older men seek out younger women and girls in the belief that such partners are less likely to be infected with HIV. And some girls and young women seek out older men who can provide them with the economic means to take care of some of their needs in exchange for sex. Because older men tend to have been sexually active for many years and may also have other partners in the high-risk category, the consequences for girls and young women can be catastrophic.

Poverty and other economic factors

Although the relationship between poverty and HIV transmission is not simple, it is possible that many of the factors predisposing many Africans to increased risk of HIV infection—particularly girls and women—are aggravated by poverty (Farmer, Connors and Simmons 1996; Kim and others 2000; Namposya-Serpell 2000; Sachs 2001; Poku 2002; Whiteside 2002; Poku and Whiteside 2004). Perhaps more importantly, the impacts of HIV and AIDS contribute to impoverishment.

Labour migration facilitates the spread of HIV/AIDS

“The long-haul truck routes are called ‘HIV corridor’, and we can see how HIV rates are much higher along our highways to the coast.” Participant, CHGA Interactive: Mozambique.

The lack of economic opportunities in many of Africa’s rural areas has long induced men (and increasingly women) to migrate to urban and other wage centres in search of work, especially in southern Africa where seasonal or temporary migration brings migrants home to their families regularly, probably facilitating the rapid spread of HIV. In South Africa, for example, HIV prevalence has been found to be twice as high among migrant workers (26%) as nonmigrant

workers (Crush 2001; Lurie and others 2003). Large-scale migration in the context of impoverishment, deep socioeconomic inequalities and social dislocation appears to be ideal terrain for the spread of HIV/AIDS and other sexually transmitted infections (Kark 1949; Myer, Morroni and Susser 2003). Very high infection levels have been reported in areas beside major transport routes, at border crossings, near military bases and around mines and agricultural estates (IOM 2003).

Women's economic vulnerability increases their chances of contracting HIV/AIDS

“When the husband has a wife back home in the village and a girlfriend near the mines where he spends months at a time, and the wife at home has one or even two lovers who help her with food and things for the house because the husband doesn't send enough money home, you have a very fertile ground for the spread of HIV.” Participant, CHGA Interactive: Botswana

The overlapping impact of gender and socioeconomic inequalities appears to be especially harsh in southern Africa, where the income-earning opportunities are meagre for women with little or no education, leaving them highly reliant on remittances from male partners and other kin. Indeed, at least one recent study suggests that women remaining behind in rural hinterlands sometimes resort to transactional sex to survive. Among HIV discordant couples in South Africa's KwaZulu-Natal province, 20% of women were HIV-positive while their migrant husbands were HIV-negative (Bachmann and Booysen 2003). Anecdotal accounts from southern Mozambique point in a similar direction (Lurie and others 2003).

Research in Mandeni, South Africa, has persuasively correlated exceptionally high HIV infection levels, widespread transactional sex and job losses in the female-intensive textile and garment industry after the removal of tariffs and subsidies (Hunter 2002). The same industries in Zambia and Zimbabwe have also suffered severe job losses, further impoverishing women and plausibly accelerating the AIDS epidemic.

Political factors

An enabling political leadership facilitates the prevention of HIV

“In Africa, because of all our problems, we have learned to not take our lives very seriously. We have to take AIDS seriously and make our leaders realise that neglecting it is killing us.” Participant, CHGA Interactive: Morocco.

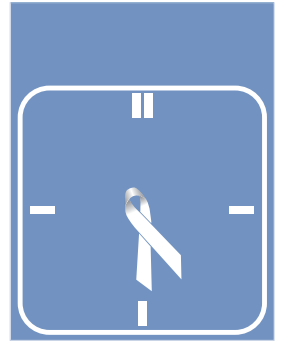
With some important exceptions, political, religious, business and social leadership on HIV and AIDS has been weak, fragmented or inconsistent. Reluctance to recognize the epidemic, discuss its sexual context and provide adequate resources for effective prevention programmes characterized much of the leadership response until recently. Many observers in most countries and in international organizations believe that the spread of AIDS in Africa could have been slowed if African leaders had been more engaged and outspoken in earlier stages of the epidemic. Without strong leadership early in the epidemic, prevention programmes have lacked the political influence to generate credibility, public support and resources.

It is not just the absence of leadership that allows the epidemic to proceed unchecked. Also important is the insufficient focus on the critical factors that drive the epidemic and its selective impacts. National responses have been too uncritical of some approaches favoured and funded by international and bilateral agencies. Similarly, national programmes have not drawn upon the wealth of formal and informal knowledge to engage and motivate the public (UN Millennium Project 2005). In too many instances national programmes have put aside what is known within countries, allowing themselves to be shaped by views of external funding agencies.

Conclusion

HIV transmission is the outcome of factors and dynamics that facilitate or inhibit the spread of the virus—ranging from the physiological and biological to the social economic and political. As will become clear in subsequent chapters, many of these factors are being partly addressed by national governments in partnership with businesses, civil society organizations and the donor community. However, the interconnections between these driving factors add to the complexity of effectively dealing with HIV and AIDS and make progress in prevention and mitigation difficult. Even so, valuable lessons and examples have been gained. For

example, political leaders at all levels and in all sectors are crucial in acting on the diverse factors that influence the epidemic, as is the targeting of policy response towards its drivers.



2. The Challenge

to Governance and Development

Chapter at a glance

HIV/AIDS will slow Africa's economic growth, but most important it will deplete human capital. This loss of human capital will cripple countries' capacity to develop an effective response to HIV and AIDS. It will also impede the transmission of knowledge across generations. Over time declining human capital and lower investment will reduce the productivity growth that underpins long-term income growth. This will reduce society's ability to invest in children's education.

Across Africa skills are being eroded by premature deaths caused by AIDS. Increasing mortality among adults sets in motion three processes in a devastating combination. First, by increasing mortality of women and men in the prime of their working lives, AIDS affects the public sector's ability to function and the private sector's ability to achieve full productivity. Second, both rural and urban livelihoods are disrupted, and the ability of some affected households—particularly those headed by women—to function is threatened. Third, the cumulative effect of the first two processes threatens the stability and viability of governing systems and thus of socioeconomic development.

Therefore, AIDS poses serious challenges to the ability of the African state to maintain efficient public institutions and deliver sound policies, promote the rule of law, sustain livelihoods and provide an enabling environment for public, private and civil society. But these challenges can be met if governance continues to improve across Africa.

The main source of socioeconomic losses is the reduction in output due to rising levels of adult morbidity and mortality, and the reduction in human capital that undermines productive capacity throughout the economy. Development is undercut by the loss of human resources everywhere, the deteriorating performance of key organizations (revenue departments, central banks, legal authorities and ministries of education and health) and the fragmentation of vital economic networks. Investment declines as households, businesses and governments increase their recurrent expenditure to compensate for losses and disruptions because of sick or dead individuals.

By 2020 the nine most severely hit Sub-Saharan countries may lose 13%–26% of their agricultural labour force to AIDS. Those dying are not merely agricultural workers. They are household heads, mothers and fathers of young children or adolescents, caregivers for the old and sick, transmitters of agricultural and liveli-

hood knowledge and skills and custodians of social safety nets. So they are also those reproducing the future labour force, endowing it with skills, knowledge, entitlement systems and safety nets.

The health system—usually at the forefront in absorbing the impact of HIV/AIDS-related illnesses—is being eroded through the loss of many skilled personnel. Health staff are retiring, leaving for the private sector or other countries and succumbing to HIV/AIDS.

In high-prevalence countries the epidemic is adversely affecting popular participation through attrition among the politically active age groups. The attrition among government officials and civil service personnel is compromising the state's ability to implement decisions and policies. The epidemic is also likely to affect popular political opinion and levels of activism by reshaping political priorities and loyalties.

Introduction

Africa's complex societies—their economies and governance—rely on people, and their skills, wisdom and networks. Like many diseases, AIDS is lethal. But AIDS is unusual in that it kills prime age adults, in large numbers, over a protracted period of time. These features of the epidemic led analysts to fear that the epidemic posed an unsurmountable challenge to governance and development. The CHGA concludes, based on hard evidence, that worst case scenarios are not coming to pass. African governments and societies can surmount the challenges of governance and development posed by HIV and AIDS.

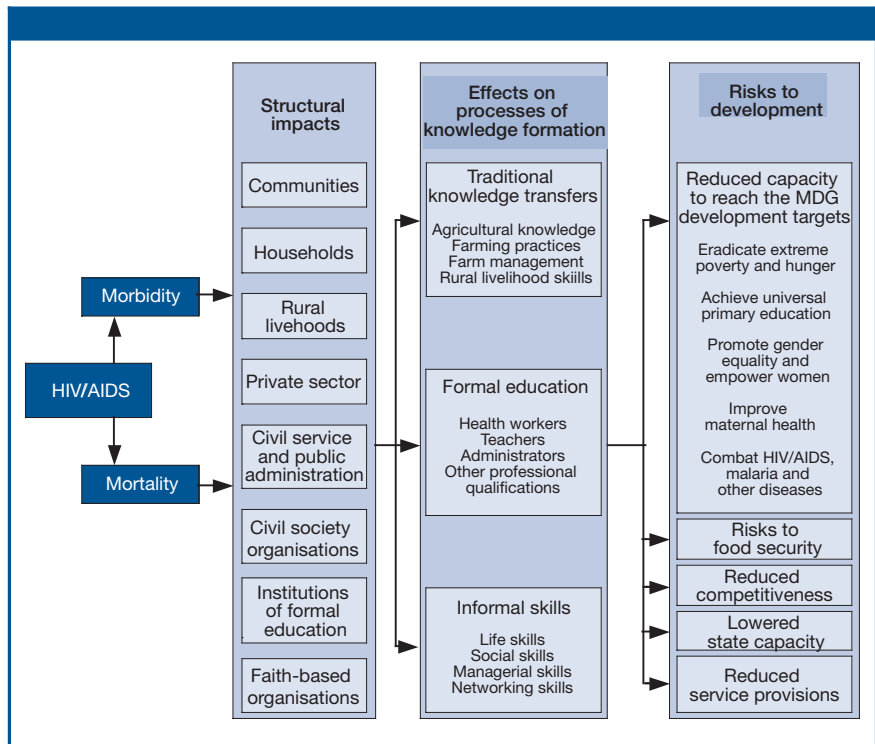
Nonetheless, HIV and AIDS are among the most serious challenges to Africa's governance. The combination of human resource losses combined with the need for a major rollout of public service provision, create a considerable challenge which requires resources and careful policymaking if it is to be met. Across the continent, human capital is being lost because AIDS is killing people prematurely. High rates of adult morbidity and mortality undermines the efficiency and effectiveness of public institutions, private companies, and households. Knowledge, experience and skill are all depleted. In the words of a participant of the CHGA consultation in Ghana: “In the long term, these changes are insidious because they impact adversely on all levels of the economy and society and on the learning systems, both formal and traditional” (CHGA/ILO 2004). As a result, Africa's HIV and AIDS epidemic is contributing to the obstacles in the way of Africa meeting the economic growth and poverty reduction targets embodied in the Millennium Development Goals (figure 2.1). Human resource losses also impede Africa's ability to meet targets for education and health care—including the roll-out of AIDS treatment.

Meeting the challenges of good governance, service delivery and development, requires policymakers to minimize the current and future losses of human resources, especially in key development sectors. Innovative ways have to be found to meet the service obligations of the public sector.

The epidemic's impacts on human resources vary. In some places they are deeply felt across a community or sector—in others, mainly at the level of the affected household. While there is a growing body of data on these diverse impacts, there is not enough evidence to draw sweeping conclusions. Even so, the Commission's

research at the local and national levels illustrates what is occurring in affected sectors and provides examples of what can occur more broadly. In some cases it is possible to ascertain specific links between HIV/AIDS and socioeconomic changes. In many other cases those linkages are less clear, with the epidemic just one of several factors related to observed changes. An improved understanding of the dynamics of the epidemic and its impact is needed to shape the most effective responses.

Figure 2.1
How AIDS depletes human capital



The challenge to governance

The CHGA was set up in response to the fear that HIV and AIDS would undermine state's capacity to function and thereby contribute to governance crises. In 2000, a U.S. national intelligence estimate predicted that the epidemic would sufficiently erode the capacity of African states that it would be a threat to the security of the U.S., noting that 'the persistent infectious disease burden is likely to aggravate and in some cases, may even provoke economic decay, social frag-

mentation and political destabilization of the hardest hit countries in the developing world.’ (National Intelligence Council 2000: 10). Subsequently some analysts feared that the epidemic could have such profound impacts on the security of states that it would spark war and anarchy (International Crisis Group 2001). One report even proposed that AIDS would create terrorists in Africa (Neilson 2005). Two analysts have recently written, ‘Amid the unrelenting catalogue of horrors ... must be added the real possibility that with HIV/AIDS the very survival of the African state may well be at stake.... There is every reason to suppose that AIDS may well be the deciding factor in shaping the body politics [sic] in many societies on the continent.’ (Poku and Sandkjaer 2007, p. 1) It was precisely in response to such alarming predictions that CHGA and others have investigated whether Africa’s HIV and AIDS epidemics would indeed imperil the survival of the African state. Four years later, such apocalyptic scenarios can readily be dismissed as without empirical foundation. However, HIV and AIDS do pose serious challenges to Africa’s governance, which require urgent attention. The imperatives of good governance, service delivery and development face additional challenges on account of the epidemic.

Governance (as distinct from Government) can be defined in many ways, ranging from systems of rule at all levels of human activity (Rosenau, 1995) to the conduct of political rules of the game (Hyden 1999), or the setting, application and enforcement of the rules of the game by the state where such rules derive stability from legitimacy (Kjaer, 2004).

The definition of governance adopted by CHGA includes the ability of the state to maintain efficient public institutions and deliver sound policies, promote the rule of law, sustain livelihoods and provide an enabling environment for public, private and civil society. In line with this definition, this chapter examines in turn, AIDS and threats to security, democracy, administrative capacity, education service provision, health service provision, agriculture, the private sector, and economic growth. Based on the evidence available, it is apparent that HIV and AIDS compound the problems faced in each of these sectors, but in all cases the crisis is surmountable with the right combination of political will, good policies, and resources.

AIDS and Security

The foundation of good governance is law and order. There is good evidence that HIV and AIDS pose serious challenges to the core law and order institutions in African states. Given the severe threats posited by some writers, there is remarkably little robust research on this topic. However there are strong indications that the problems are manageable given the right resources, policies and leadership.

Police and Law and Order

Police services are at the front line of maintaining the rule of law. They are the public face of the state. They are first responders to infringements of the law and threats to public order. And they are an important role model and influence on the general public.

The police are important to the challenges of HIV/AIDS and governance in three ways. First, there is a fear that the challenges faced by police officers will be increased by the social and demographic effects of the epidemic, such as larger numbers of poorly socialised young people. If true, this would require police forces to be larger and to be redesigned with new threats in mind. Second, policemen and women themselves become infected with HIV, and the illness and death of police officers can adversely impact on the effectiveness of police services in carrying out their duties. If a police force suffers reduced capabilities on account of the epidemic, the prospects of law and order will be reduced. And third, police services are at the front line in the governance of the epidemic. Duty officers deal on a day to day basis with individuals who are at a heightened risk of acquiring or transmitting HIV, including commercial sex workers, injecting drug users, unregistered migrants, street children, and other marginalized or stigmatized groups. The conduct of the police can therefore help determine the trajectory of the epidemic.

The fear that HIV and AIDS would themselves generate an increase in crime and disorder can be called the 'security demographic' hypothesis. Martin Schönteich of the Institute of Security Studies in Pretoria first raised the alarm that South Africa's AIDS epidemic might lead to a disproportionate number of young men (a 'youth bulge') in the population that would risk increasing the crime rate, and this would be compounded by poor socialization of orphans (Schonteich 2000). Because most crime is committed by young men aged 15-24, any increase in the demographic proportion of that group will statistically entail an increase in crime. Four years later, Schönteich's colleagues at the ISS reviewed the evidence and concluded that the evidence shows that his fear was overstated (Pharoah 2004). In addition, Rachel Bray (2003) challenged the claim that an increase in the number of orphans would contribute to an increase in crime. She found that the numbers of orphans had increased, but there was little evidence that they had yet overwhelmed the capacity of society to care for them. For example, the numbers of street children had not significantly increased, and even those children who were living without close family support, were connected to kinship and social networks that provided socialization. She concluded that orphans were not a threat to South Africa's social stability.

Roderick (2008) provides an overview of the state of knowledge of policing and HIV/AIDS in Africa—a review that demonstrates how much this critical area has been neglected by scholars and policymakers alike. The African Civil Society Governance and AIDS Initiative (GAIN), established in November 2003 to support the work of the CHGA, commissioned a number of studies into the police and HIV/AIDS in Africa. Gabriel-Nelson (2008) conducted a survey among paramilitary personnel in Benin, finding that there was a low level of knowledge about HIV and few programmes focused on police and paramilitary officers. This indicates that police services are vulnerable to the spread of HIV through their ranks. Masuku (2008) examined the impact of HIV and AIDS on the South African Police Service (SAPS), focusing on the Johannesburg area. He found that, according to SAPS published data, in-service deaths of police personnel increased by a factor of 50% between 2002/03 and 2004/05, consistent with the overall increase in mortality in the general population, largely attributable to AIDS. He also found a significant increase in the number of police officials taking sick leave. The data do not indicate that policemen and women are falling sick or dying at a substantially greater rate than the general population, but they clearly imply that the SAPS, in common with other public sector institutions, needs to attend urgently to the impact that the disease is having on its ranks and on its institutional effectiveness.

Police services occupy a particularly important position during periods of post-conflict reconstruction. Thompson (2008) studied the security sector reform in Sierra Leone, focusing on the restructuring of the police. She found that police officers are routinely confronted with incidents that have implications for HIV, such as sexual abuse, but have insufficient training to deal with them appropriately. The police service itself is not well-structured to tackle these issues, and indeed there is clear evidence that implicates police officers in abuses perpetrated against vulnerable populations such as street children and commercial sex workers.

Studies on the police and HIV and AIDS remain scarce, hampered by researchers' disinterest in the topic and the sensitivities of police services themselves to share data and open themselves up to partnership in research. An important breakthrough in this regard was registered in September 2007 when the AIDS, Conflict and Research Initiative (ASCI), in partnership with UNAIDS and the UN Office on Drugs and Crime, convened the first-ever global consultation on the police and HIV/AIDS in The Hague (ASCI 2007). An Africa-wide technical consultation on the police and HIV and AIDS is a necessary and overdue next step.

AIDS and the military

In contrast to the paucity of research and action concerning the police and HIV/AIDS, there is a wealth of information on the military, which has led to a series of commitments at the highest international level. In January 2000, the UN Security Council took the unprecedented step of holding a debate on HIV/AIDS—the first time that an infectious disease had been considered a threat to international peace and security. In July that year, the UN Security Council passed Resolution 1308 which put HIV/AIDS on the map as a security issue, and mandated the UN Secretary General to act accordingly. Especially, UNSCR 1308 obliges the UN to ensure that peacekeepers were provided with training on HIV and AIDS issues, and on troop-contributing countries to ensure that peacekeepers were provided with HIV prevention, VCT and treatment. That task was assigned to the UN Department of Peacekeeping Operations and UNAIDS. The obligation was reiterated in the 2001 UN General Assembly Special Session on HIV/AIDS. The UNGASS Declaration includes a commitment “to ensure the inclusion of HIV/AIDS awareness and training, including a gender component, into the guidelines designed for use by defence personnel and other personnel involved in international peacekeeping operations while also continuing with ongoing education and prevention efforts, including pre-deployment orientation, for these personnel” and required member States to “...have in place national strategies to address the spread of HIV/AIDS among national uniformed services, where this is required, including armed forces and civil defence forces, and consider ways of using personnel from these services who are educated and trained in HIV/AIDS awareness and prevention to assist with HIV/AIDS awareness and prevention activities, including participation in emergency, humanitarian, disaster relief and rehabilitation assistance.” (UNGASS 2001).

The problem of HIV/AIDS in the military having been recognized, the question is the scale and nature of the challenge to be addressed. During the 1990s it was commonplace to identify soldiers as a category at much-heightened risk of HIV, and also as a major vector in the spread of HIV and AIDS. Without good data available to ascertain the true levels of HIV in militaries, bold assertions were the norm. “In peace time, STD infection rates among armed forces are generally 2 to 5 times higher than in civilian populations; in times of conflict the difference can be 50 times higher or more.” (UNAIDS 1998: 3). And early data, from (inter alia) the screening of European soldiers before and after overseas missions, and from Ugandan soldiers sent to Cuba and Zimbabwean officers sent to China for training, all indicated a serious problem (UNAIDS 1998; Matchaba-Hove 2006).

Recent research indicates that HIV rates among soldiers are often higher than among the general population (UNAIDS 2005) but rarely to the extent feared.

Concerns that HIV and AIDS would lead to the collapse of African militaries are overstated (Whiteside et al 2006). But this is of course no reason for complacency in countries with generalised epidemics or hyperendemic HIV.

Box 2.1

HIV in the military

In some instances, members of the uniformed security forces (military, paramilitary, police) are at greater risk of infection than their civilian counterparts and may have high HIV rates. In the 1990s it was commonly claimed that HIV rates among soldiers were two-to-five times higher than in the general population (UNAIDS 1998). Subsequent evidence has shown that this is not correct for the generalised epidemics of eastern and southern Africa. In South Africa, HIV rates among soldiers are little different to the general population (Kaisernetwerk 2005). In Ethiopia they are marginally lower (Yigeremu et al 2003). But where the national level is low, soldiers may be a high-risk group. For example a survey in Ghana found that members of the military had HIV rates two and a half times greater than the general population. Another study found that Cameroon's defence forces had HIV rates one and a half times greater than the adult population (UNAIDS 2005).

The risks of HIV infection among members the uniformed services are associated with their profession. Young men and women in the army are trained to have a sense of individual invulnerability, duty and deployment schedules keep them away from families for extended periods of time, and they have a regular income that enables men, in particular, to purchase sex.

Certain factors also predispose to low rates of infection in African armies (Whiteside, de Waal and Tsadkan 2006). One is that in infantry armies, most soldiers are young men recruited from rural areas, who have low HIV prevalence. A second is that conflict-affected populations often have low HIV rates (Spiegel 2004, 2007). Another is that many armies have adopted HIV programmes—often with little publicity—which have been effective at keeping down HIV.(Kingma, Hendrik and Yeager 2000, UNAIDS 2005).

The HIV and AIDS epidemic affects the military at all stages of its activities. It affects force procurement. Armies recruit from the general population and if HIV rates are high, then the pool of available recruits is diminished. This is not a major problem for most African militaries given the large numbers of young men available and the low rates of HIV infection among young men, especially in rural areas. All armies that can do so, test recruits for HIV (UNAIDS 2005).

A second challenge is to ensure that those who have been recruited stay free of HIV. Once in the army, there is evidence that soldiers may be more at risk of infection than their civilian peers. This challenge is particularly relevant to training and promotion. Most armies require soldiers who wish to go for further training or deployment on overseas missions to test for HIV (Rupiya 2006).

The most acute challenges arise at the level of operational deployment. The preferred policy is non-deployment of soldiers who are HIV-positive. Prevalence of HIV of anything over 5% significantly erodes the operational capability of that army. A battalion of peacekeepers to be deployed cannot be deployed at full strength because of the number of soldiers who are considered unfit; usually, other soldiers would have to be drafted to fill the gap. Given the importance of unit cohesion and morale to operational effectiveness, this is a double disadvantage. The problems are multiplied because of the rotation of troops on operational duties, with the result that it is more difficult for African armies with a high prevalence of HIV to contribute to peacekeeping missions on the scale demanded. Meanwhile, the increased chances of soldiers becoming infected with HIV while on peacekeeping missions is itself a problem for both host communities and militaries.

A fourth set of challenges concerns budgeting for the military. One researcher has noted “the incorrect perception that militaries in Africa are well-funded. This often leads to their exclusion from civil society resources.” (Matchaba-Hove 2006: 176) Most militaries maintain their own health services, separate from the civilian population. These clinics and hospitals also serve the families of servicemen. As with civilian hospitals, their resources are taken up with responding to HIV and AIDS. But they are often excluded from eligibility for international donor funding, or do not think to apply for it. Military planners typically aim to spend 40% of their overall budgets on human resources, including health and other benefits. With HIV and AIDS, this proportion rises, not only because of increased health costs, but also because of the needs for supporting army widows and orphans. As most governments do not fully disclose their military budgets, it is difficult to monitor the budgetary impact of HIV and AIDS on the defence sector. The financial impact on peacekeeping operations can be more readily ascertained, as the epidemic has placed additional requirements on the health dimensions of UN peace support operations (UNDPKO 1999; US General Accounting Office 2001).

With technical assistance from UNAIDS and bilateral donors, African militaries have taken considerable steps to tackle HIV/AIDS in the ranks in such a way that the disease does not threaten their integrity and viability. Botswana’s programme is considered “best practice” and has been offered as a model to other African militaries (Rupiya 2006). Other best cases include Ethiopia, where HIV and AIDS programming was identified as a command issue (as opposed to only a medical issue) as early as 1996 (Tsadkan 2002, 2008; Whiteside et al 2006).

Some of the most urgent issues concerning HIV and the military arise with peacekeeping missions, on which soldiers are expected to behave with the utmost propriety and discipline. During 2003-04, the African Union began its initial steps towards establishing the African Standby Force, for regional peacekeeping

operations, and the Common Security and Defence Policy (CDSP), as a precursor to developing a common defence and security doctrine. From the outset, HIV and AIDS were recognized as essential components of the CDSP and essential guidelines for the African Standby Force and its subregional brigades (African Union 2003, 2004a, 2004b; Tsadkan 2008). One of the principles adopted by the African Chiefs of Defence Staffs at a meeting in January 2004 was that the African Union's standards for HIV and AIDS in peace support operations should meet or exceed the principles laid down by the UN. In turn, this requires that the troop contributing countries, which are responsible for the vast majority of troop training and preparation, each develop HIV and AIDS policies and practices that are consonant with both UN and AU guidelines and standards. Lt.-Gen. Tsadkan Gebretensae, who advised the African Union on this, proposed that a "command-centered approach" be adopted with the task of developing each of the following policies assigned to each army's high command (Tsadkan 2008):

1. Mandatory and voluntary testing;
2. Administration and management of anti-retroviral treatment and the rights of people living with HIV and AIDS;
3. Human resources management and development;
4. Budgeting;
5. The rights of soldiers' dependents and the associated civilian population;
6. Development of toolkits (Standard Operating Procedures) to mainstream the fight against HIV/AIDS with the core activities of the armed forces;
7. Creation of a monitoring structure for the implementation of those activities.

These challenges remain. In response to the specific challenges of integrating AIDS planning into the CDSP, with special regard to its peacekeeping obligations, the African Union has requested the Centre for Policy Research and Dialogue in Addis Ababa, in collaboration with UNAIDS and UNFPA, to develop a strategy under the umbrella of the ASCI which is due to report at the end of 2008.

AIDS and Democracy

Africa's HIV and AIDS epidemics have coincided with sustained efforts to promote democracy on the continent. The disease poses a set of distinct threats to democracies. This was the major concern of the African civil society Governance and AIDS Initiative (GAIN), and resulted in a series of research and consultation activities intended to ascertain how these threats could be managed. Several other research projects, notably the team headed by Kondwani Chirambo at IDASA,

have examined the question of AIDS and democracy in exemplary detail, providing a robust evidence base which allows some clear conclusions to be drawn.

Samantha Willan's research for GAIN found a number of measurable impacts of HIV/AIDS on South Africa's electoral system (Willan 2004). The number of by-elections increased between 2000 and 2004, putting additional financial and administrative demands on the electoral administration. South Africa relies on a core of trained personnel plus a large number of volunteers and enlisted short-term staff, many of them teachers. All of these occupational groups suffer high rates of HIV. A particular problem for the electoral commission is updating the electoral roll. As AIDS deaths increase, the removal of dead voters from the voters roll becomes an increasingly demanding function, complicated by under-registration of deaths. Given the common allegations of electoral fraud, including the existence of 'ghost voters,' this creates opportunities for manipulation or disputation of outcomes.

For the 2004 election, South Africa's Independent Electoral Commission required Municipal Electoral Officers to visit all citizens who were in hospital or bed-ridden to register them for voting, and visit them again during the election so they could cast their votes. This is a necessary exercise given the rates of illness associated with HIV and AIDS, but it is also complex and costly. Voter registration also becomes more complicated as both voters and IEC staff become sick, overburdened or disillusioned.

In another piece of research commissioned by GAIN, Ephraim Kimotho (2008) interviewed Kenyan MPs, councillors, parliamentary staff and members of the Electoral Commission of Kenya (ECK). One of Kimotho's major findings was the time and financial burdens on elected representatives arising from the increased hardships and more frequent deaths of constituents. MPs and councillors are expected to organize and participate in a range of fundraising activities, with local cooperatives and 'Harambee' events. In the past, these activities were mostly for community development. Today, 85% of those interviewed estimated that most of their fundraising was for constituents' medical bills. They estimated that 30% of their time is spent in churches, attending funerals and fundraising events.

In Kenya as elsewhere, the pace of by-elections due to incumbent deaths has picked up. Eighteen MPs died in office over the ten years between July 1993 and July 2003, eleven of them between 1998 and 2003. These by-elections are expensive. But a decrease in the number of vacant seats due to electoral petitions and defections has meant that the overall number of by-elections has not increased. An estimated four-to-five parliamentary staff die each year from AIDS and related illnesses.

Kimotho's research identified two possible distortions to the democratic process itself. One is the existence of large numbers of 'ghost voters' who have died but have not been removed from the electoral roll. A 2002 study by Kenya's Institute of Education and Democracy estimated that 15.8% of registered voters were in fact dead. The problem of possible 'ghost voting' is compounded by even larger problems with voter registration, which can take as many as nine trips to the central office in Nairobi to collect an ID card. At the time of the research in 2006, there were an estimated 1.4 million uncollected voter identity cards nationwide, nearly half in Nairobi alone. Unlike South Africa, there are no special provisions for the infirm or incapacitated to be helped to vote. These factors together make it easier for votes to be rigged. A second problem is vote buying, especially among poor female voters, many of whom have to pay medical bills or support orphaned children. Sixty percent of the MPs and councillors said that they focus their campaign efforts on women, and one young woman in Naivasha commented, 'I cannot go hungry if I sell my vote.'

Local democracy is also impacted by HIV and AIDS. There are few studies of this to date though IDASA has an ongoing research project on this topic commissioned by ASCI. One of the few pieces of research in the public realm is Manning (2003) who studied the municipal council of eThekweni (Durban) in South Africa. Manning analyzed data on councillors' reasons for missing meetings and concluded, 'if the trends are accurate, they show that a growing proportion of councilor absences are the result of illness, and that the absolute number of ill-health absences is growing.'

Per Strand and his colleagues (2005) examined voter turnout in the 2004 election in South Africa. They found some evidence for voters being exhausted or unable to participate, either because of sickness or because of caring for the sick. Turnout was down on the previous two elections at just 57.5% of the electorate. But it seems probable that the main explanation for this was that in 1994 and 1999, the very fact of voting was so historic that people turned out in enormous numbers, and a fall-off was therefore inevitable.

The implication of this research is that HIV and AIDS place additional burdens on electoral systems. The disease does not spell an end to democracy or a collapse of the state. But ensuring that democracy flourishes in the middle of the epidemic requires extra resources, management systems that allow for voter rolls to be monitored and updated, and provisions for sick voters to be able to cast their votes. Africa's electoral commissions should compare notes on how they have responded to the problems posed by HIV and AIDS and should request appropriate assistance packages.

AIDS and administrative capacity

In high-prevalence countries the epidemic has adversely affected institutional robustness and vitality and reshaped governmental structures. The depletion of workers is translating into a smaller pool of skilled workers from which government agencies can draw for staff, including staff at the highest levels of government and bureaucratic administration (box 2.2). At best, extended periods of illness and the eventual death of policymakers results in inconsistent decision making; at worst it can paralyze decision making.

Box 2.2

Functioning with fewer senior policymakers in Africa

AIDS has killed senior policymakers, including ministers, members of Parliament and senior civil servants, in many countries in Sub-Saharan Africa. Zimbabwe's president, Robert Mugabe, confirmed that three cabinet-level ministers had died from AIDS. Malawi's Minister for Physical Planning acknowledged that he was HIV positive and estimated that nearly 100 senior civil servants and nearly 800 members of his ministry's workforce had died of AIDS within the previous two years. In Malawi the Speaker of Parliament announced that 28 members of Parliament had died from AIDS between 1999 and 2003. In Zambia 39 members of Parliament died between 1984 and 2003, with just four dying of causes other than AIDS."

The epidemic's potential impact on government services is significant. The problem is likely to first affect provincial and local governmental institutions in areas in which local prevalence and infection rates are high. While the greatest number of infections and deaths is currently taking place among unskilled and semi-skilled workers, skilled and highly skilled sectors have not been spared. In South Africa, for example, HIV infection rates rose to 23% of skilled and 13% of highly skilled workers in 2006. By 2015 these infection rates are projected to reduce the skilled work force by 18% and the highly skilled force by 11% (Quattek and Fourie 2000). The effect on policy makers, national legislators, local councillors, election officials, soldiers (box 2.1) and civil servants—including doctors, nurses, teachers, ambulance drivers, fire fighters and police—will be devastating.

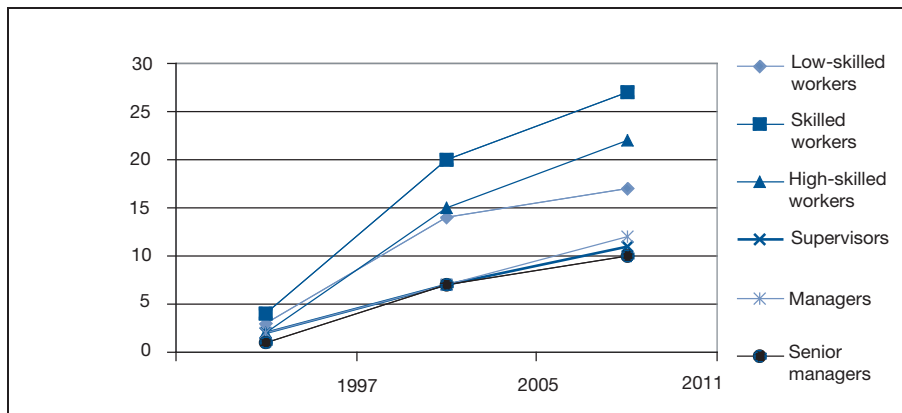
As early as 2001, internal South African government reports were warning that AIDS would become the leading cause of death among public servants by the end of that year. These reports projected the death from AIDS of as many as 250,000 public servants, or 23% of the current workforce of 1.1 million, by 2012 (figure 2.2) (Khan 2004).

CHGA commissioned one of the first public sector assessments of the impact of the epidemic on selected public sector workers (CHGA 2004). The study, of Zambia, projects that between 2001 and 2011 Zambia will need to train about

8,000 more teachers than it would have in the absence of HIV and AIDS (13,000 instead of about 5,100). A similar study on local governments reveals that they could lose 32% of the work force to HIV and AIDS over the next 20 years and that agencies will need to replace an additional 1.7% of the staff complement each year over the same period to maintain current staffing levels.

Figure 2.2

In South Africa, skilled workers and highly skilled workers are projected to be hardest hit by HIV



Source: Department of Public Service and Administration (2001).

The absolute numbers of deaths of public servants is not the only concern. High and rising levels of morbidity and mortality also have implications for the formation and retention of institutional knowledge. The epidemic reduces the ability of educated and professional cadres to pass on their accumulated knowledge and expertise to succeeding generations. As a result, younger and less experienced workers find it harder to acquire the specialized skills, expertise and professionalism needed to perform their jobs. In the longer term, fewer experienced officials will be available to train younger personnel in key formal skills or pass on informal operating procedures or norms, such as ministerial accountability, bureaucratic neutrality and ethics and institutional transparency, with effects on the quality of both public and private services.

In addition to depleting government of personnel, HIV and AIDS also erode the government's financial resources, as the tax base and thus domestic revenues grow more slowly or even shrink. The disease also results in higher (demand for) government expenditures, including higher personnel costs, through medical and death-related benefits and increased training and recruitment costs. While it is often possible to obtain external finance for specific HIV and AIDS-related

interventions (almost 80% of public spending on HIV and AIDS in low-income countries was financed by external grants), such funding is typically not available to cover the indirect costs of HIV and AIDS. These costs include payroll costs and certain categories of social expenditures.

The impact of HIV and AIDS on the government's personnel costs can be substantial. These effects have been investigated in more detail in the context of the private sector and are examined below. It is worth noting, however, that the financial costs of benefits are likely to be higher for the public sector, where benefits are typically more comprehensive, because more public servants are employed permanently (associated with higher benefit levels) and governments—for political economy reasons—may refrain from cutting benefit levels to contain costs.

AIDS and educational systems

HIV and AIDS threaten the opportunities for children to attend school and for schools to offer quality education. The effect appears first through a loss of educators to the disease and second through an erosion of countries' capacity to replace lost knowledge and skills. The implication: AIDS attacks the transmission of knowledge and skills from one generation to the next. In the worst-affected countries, such as Zambia, AIDS has nearly doubled the attrition rate of teachers (table 2.1). Whether Zambia will increase its education investment enough to offset the impact of AIDS and boost already low enrolment rates remains an issue for long-term development. When children lose a teacher or a parent, it becomes much harder for them to reach their potential and to pull themselves out of poverty. The acquisition and transmission of knowledge are issues of immediate practical import.

Table 2.1
HIV/AIDS and the transmission of knowledge

	HIV rate among teachers (%)	Increase in teacher attrition due to HIV/AIDS (%)	Number of children orphaned by AIDS	Orphans as a share of all children (%)
Eritrea	3.3	11.1	39,000	10
Ethiopia	8.6	28.7	720,000	11
Kenya	17.5	51.1	650,000	11
Mozambique	14.8	48.1	470,000	15
Nigeria	6.8	12.1	1,800,000	10
Tanzania	8.5	27.7	980,000	14
Zambia	22.8	93.1	630,000	19

Source: Data on HIV rate among teachers and increase in teacher attrition due to HIV/AIDS, CHGA 2005a; data on number of children orphaned by AIDS and orphans as a share of all children, UNICEF, UNAIDS and USAID 2004.

These data indicate that the supply of quality education by experienced teachers is under threat and in some locations is declining. We should note that in addition to losses of educators themselves, school administrators and other essential support staff are also affected. The epidemic is also affecting the demand for education. Long-term declines in women's fertility are accentuated by the HIV/AIDS epidemic, so that fewer children will be born. Child mortality rates are also increased due to HIV and AIDS. The World Bank (2004) estimates that by 2010 there will be a reduction in the primary school age population of 24% in Zimbabwe and 20% in Malawi and Zambia. For both demographic and socioeconomic reasons, school enrolment in Swaziland is reported to have fallen by 36% due to HIV and AIDS, with girls most affected, an indicator of how other educational systems may be affected in the future (UNAIDS 2005).

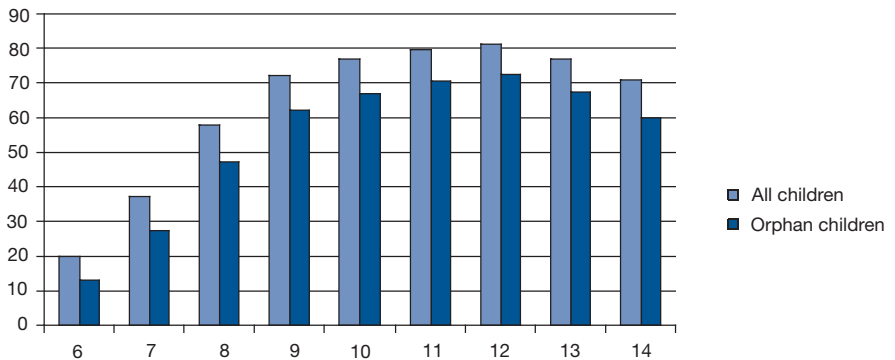
The epidemic also increases inequalities in children's opportunities for schooling. Children who have lost one or both parents are less likely to be enrolled in school—partly as a result of the household's deeper poverty and partly because the children are forced to work to help support their families (Rau 2003). Schooling for two groups of children is particularly damaged by HIV/AIDS—those from low-income households and those orphaned. The loss of income of an adult family member unable to work because of HIV-related illnesses may make the costs of even primary schooling too high. And children orphaned by AIDS are less likely to attend school (figure 2.4). Girls usually are withdrawn from school first, often to assist with caregiving and to allow adult women to work (CHGA 2004c, 2004d).

The quality of education is threatened by the loss of teachers. In 2004, the World Bank (2004) estimated that 200,000 teachers, 9.4% of the total employed in 2004 in sub-Saharan Africa, could die of HIV-related illnesses over the subsequent decade. Five countries could account for nearly two-thirds of these deaths—Kenya for 25,000, Nigeria 22,100, South Africa 44,900, Uganda 14,900 and Zimbabwe 16,200. A CHGA study in five countries projected the likely attrition in the teaching profession over the coming years (figure 2.5). In the event, these predictions appear to have been on the pessimistic side. However, even teacher attrition continuing unchanged at existing rates entails a very considerable loss of human resources to the educational system.

The loss of qualified teachers and their absence during periods of prolonged illness disrupt continuity in learning, with long-term implications for the students and society, especially in the absence of ARV treatment.

Figure 2.3

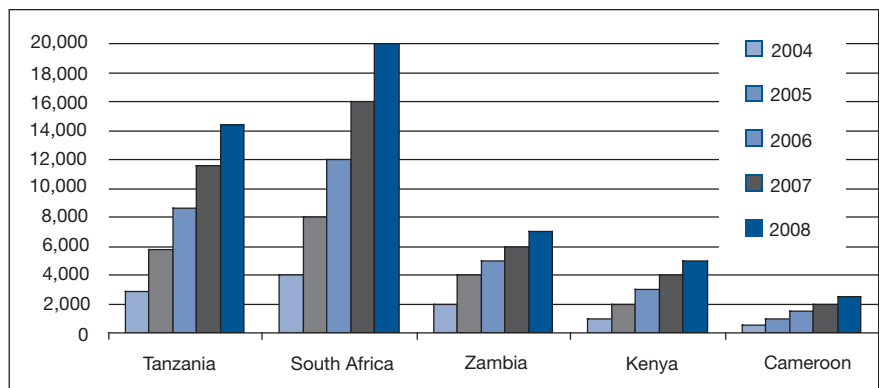
Children orphaned by AIDS in Zambia are less likely to attend school
Percent



Source: Garcello and Rosati 2003.

Figure 2.4

Cumulative losses of teachers to AIDS will be high on current trends



Source: CHGA 2005a.

The training of the next generation of professionals, technicians, skilled workers and administrators is being undermined by human resources losses in training institutions throughout Africa. Little is known about the losses of training capacity in general, and the implications of losing experienced trainers have not been extensively researched. For universities, too, limited evidence suggests increasing losses of highly educated staff.

The impact of HIV/AIDS on school systems has been studied by one of the CHGA research teams, and the evidence points to growing difficulties in replacing teachers who have died or retired for medical reasons (Mobile Task Team 2005). Evidence from South Africa confirms that retaining human resources in the education system

is an extreme challenge for the government (table 2.2). HIV prevalence is high at all levels and across all skill categories. While HIV infection is concentrated among the youngest and most recent entrants to teaching, the losses of human resources are occurring among those with extensive experience and teaching capacity in such subjects as science and technology. HIV prevalence among educators is very much higher in KwaZulu Natal, at 22%, complicating responses to the impact on the broader educational system.

Table 2.2

Overall HIV prevalence by type of educational institution and position in educational system, South Africa, 2004

	HIV Prevalence (%)
<i>Type of institution</i>	
Primary school	12.3
Secondary school	12.5
<i>Position in the educational system</i>	
Educator teacher	14.1
Senior teacher	9.6
Education specialist	10.0
Deputy principal or principal	7.3

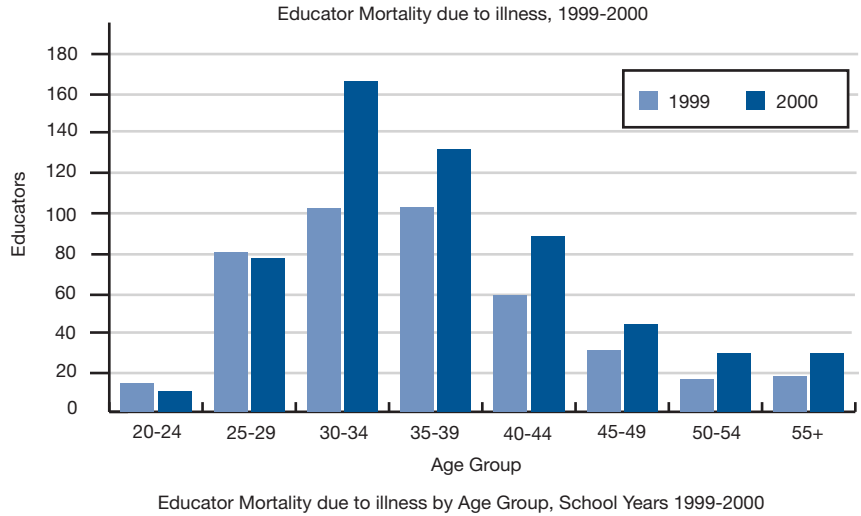
Source: *Shisana and others 2005.*

According to a study on mortality among educators in KwaZulu-Natal Province in South Africa, in 1998, 90% of all educators who died were 49 or younger (figure 2.5). This percentage rose to 93% in 1999 and 2000, before declining slightly to 92% in 2003. Mortality rates for educators (from all causes) are three times higher than the normal (without AIDS) mortality rate for South Africa among people the same age. These results may be indicative of the extent of attrition in the education sector throughout South Africa.

Mortality among women educators is much higher than among men educators (figure 2.6). The fact that nearly 68% of teachers in the province are women could account for this significant difference.

Figure 2.5

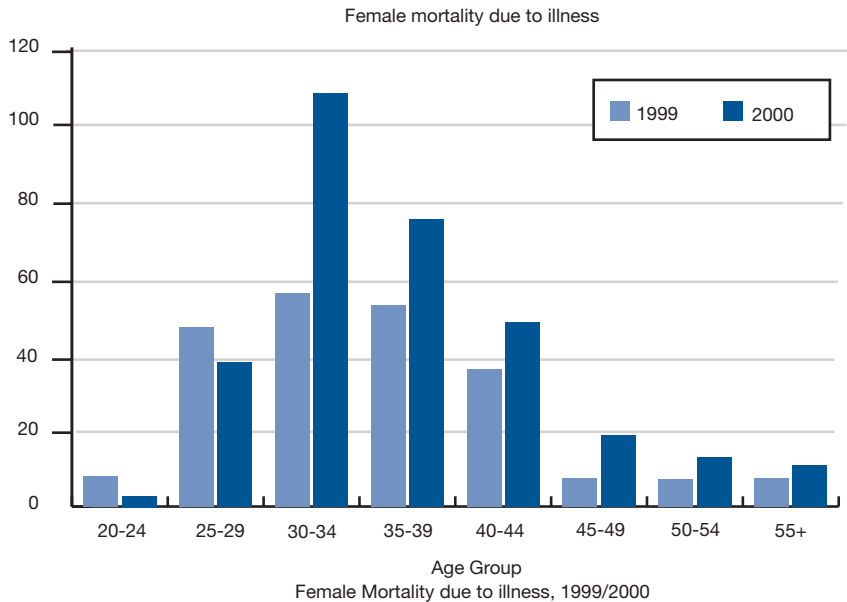
The death rate among educators rose dramatically between 1999 and 2000, especially among those 30–34



Source: KwaZulu Natal Annual Survey, 2000 and 2001.

Figure 2.6

Female educators in South Africa are much more likely than male educators to die of illness



The KwaZulu-Natal study concluded that:

AIDS-linked mortality is incrementally eroding the capacity of the system and will inevitably have dramatic repercussions for educator recruitment and training. More to the point, it alerts us to the fact that AIDS is adding to existing levels of attrition and will inexorably “target” any latent dysfunction in the system. In flagging the fact that the system is losing educators at the peak of their professional skills—and therefore also losing experience and institutional memory—it alerts us to the fact that it is really no longer business as usual.

A CHGA study of 10 countries in southern and eastern Africa found that only three were trying even in the broadest terms to estimate the probable losses of teachers over the coming decade and the challenges the losses will pose for the continuing efficacy of the education system (CHGA 2005a). In many countries ministries of education were concerned mainly with HIV prevention through curriculum reform. In general, they have not realized that such activities have to be combined with efforts to sustain human resource capacity in education—including comprehensive approaches that deliver prevention, treatment and care for children, staff and their families.

It seems inevitable that countries will not meet their core needs for specific skills and professionally qualified personnel, so how is some sort of “residual minimum” of capacity to be maintained? Existing methods of training teachers and other professionals are highly resource-intensive, and less expensive ways of replacing lost human resources need to be developed. And different ways of delivering education—such as the experiments with community-focused primary education in Zambia—need to be assessed and where feasible and necessary scaled up.

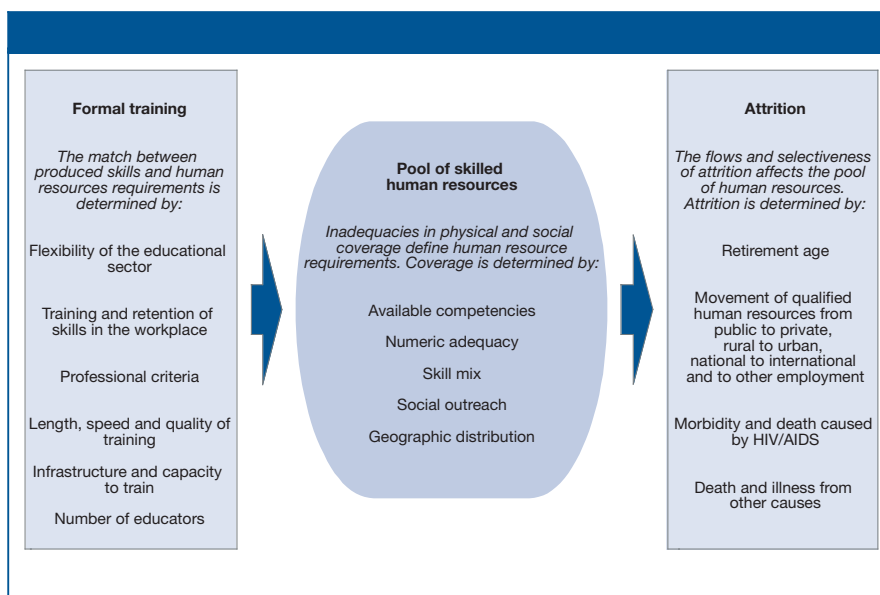
AIDS is eroding health systems

The health system—in the front line in absorbing the impact of HIV/AIDS-related illnesses—is being eroded through the loss of many skilled personnel. Health staff are retiring, leaving for the private sector or other countries and succumbing to AIDS itself (figure 2.6). The epidemic struck in an era when health systems were under-funded and subject to disruptive reforms. As a result, coverage rates for essential services remain very low, with many countries spending less than \$10 a person a year on health care. So, as HIV/AIDS prevalence is increasing, health (and other) services are being cut back. Major international commitments and initiatives to expand health care provision in Africa are therefore being undertaken on the foundation of a weak system with diminishing human resources. Increased demand for health services is occurring when the system’s capacity to respond is reduced.

A study in South Africa found that HIV-positive patients were, on average, hospitalized for 20 days, four times longer than the average for patients admitted for other ailments. Another study, from Rwanda, found that HIV-positive patients used health services at least 20 times more extensively than HIV-negative patients (Nandakumar and others 2000). In Addis Ababa the city government reports that 57% of the city's already insufficient hospital beds are occupied by AIDS patients (AA-HAPCO 2005). People living with HIV/AIDS in urban areas averaged 10 times more visits than those in rural areas, probably reflecting rural people's lack of access and inability to pay. Numerous qualitative reports from across Africa support these findings.

Figure 2.7

The stock and flow of human resources for health is determined by formal training and attrition



And as the workloads of health workers increase, they themselves are being lost to AIDS (see figure 2.7). A study in South Africa found that more than 16% of health workers were living with HIV/AIDS, with higher rates in some provinces, among nurses and among younger and non-professional staff (Shisana, et al 2003). The country could lose nearly 6,000 health workers a year to HIV/AIDS between 2005 and 2015, when mortality from the epidemic is expected to peak. Malawi's health services saw a threefold increase in staff deaths between 1992 and 2000, with the greatest losses in the 30–44 age group (Malawi Institute of Management 2002). Sudden vacancies go unfilled for long periods, institutional memory is lost, and the quality of service is reduced as younger and less experi-

enced replacements are recruited. And in many countries the replacement of lost workers is cumbersome and time-consuming, reducing both the quantity and quality of services. The CHGA study also found that HIV/AIDS has increased system costs through sick leave, disability entitlements and such direct health service benefits as insurance or covering the cost of funerals.

The productivity of health workers is also affected. Data gathered by CHGA from the ministries of health in Kenya and Zambia indicate fivefold to sixfold increases in health worker illness and death rates, reducing personnel and increasing stress and fears for personal safety among remaining staff (CHGA 2005b). A study in Malawi estimated health worker attrition rates of 2.3% a year, with deaths accounting for half (Malawi Institute of Management 2002). The annual death rate of Malawian health workers is estimated to have increased from 0.5% in 1985 to 3% in 1997. Another study estimates that up to 25% of nurses in southern Africa are HIV-positive; rates among nurses in Lusaka were as high as 44% in 1992 (Aitken and Kemp 2003).

The evidence suggests that the risk of acquiring HIV through occupational risk exposure is relatively low, but the perceived risks are significantly higher, with half of health staff believing that protection measures were inadequate (CHGA 2005b).

The human resources implications of scaling up health services are immense. Estimates suggest that providing all eligible Zambians with antiretroviral therapy would require half the existing physician workforce and a doubling of existing laboratory technicians by the programme's fifth year. It would also consume two-thirds of the health budget, even before adding counselling and testing (CHGA 2005b). There are major concerns that scaling up AIDS programmes could exacerbate the trend of health workers abandoning rural clinics and general practice. High demand for trained physicians and nurses for treatment programmes, especially in urban hospital settings, can be met only at the expense of drawing highly trained and experienced staff from elsewhere in the health system.

For Tanzania the projected levels of available human resources would be just over a third of those required to deliver the child and maternal health package. Even under favourable assumptions, including a 50% increase in training capacity, human resource availability will not allow the widespread implementation of priority interventions, and the government will not be able to avoid prioritizing among goals and disease areas and adjusting targets (Semali and Kimambo 2003). The evidence presents an alarming picture of the state of the health workforce in Tanzania, which will be grossly inadequate to meet nationally and internationally defined health goals.

To support the functioning of health systems and to improve levels of care for people affected by HIV/AIDS, several questions need to be answered. How to sustain numbers of health care workers? How to shorten training periods without undermining quality? How to improve interregional and international cooperation to fill gaps in trained personnel? Some answers are discussed in Chapter 4. There are no ready answers for every country, or even parts of countries. Deep understanding of human resource needs, active discussion of options within the health system and society and careful review of training and financial resources are all needed to produce effective approaches.

AIDS is hitting agriculture hardest

Agriculture, the largest sector in most sub-Saharan economies, accounts for a significant part of production and provides livelihoods for most Africans (CHGA 2004b). The economies of countries most affected by HIV and AIDS—with the important exceptions of Botswana and South Africa—are reliant on agricultural production and exports. In Malawi, where adult HIV prevalence is estimated at 14.1%, some 85% of the people earn a living from agriculture, and about 80% of the country's food comes from smallholder farming, with most farmers cultivating less than a hectare (CHGA 2004a). Yet external assistance to agriculture and rural development in Africa has declined dramatically over the past 20 years, as in other developing regions. This decline could be justified only if food security in Africa were improving, rural poverty diminishing and the countries more capable of producing the public goods essential for agricultural growth and rural development. Yet across Africa countries are experiencing deteriorating food security, rising rural poverty and stagnating agricultural growth (Benson 2004). The implications of HIV and AIDS provide a powerful incentive for increasing investments in agriculture and rural development.

Agricultural production is hard-hit by HIV and AIDS for the simple reason that it is a labour-intensive sector in which the options for reorganizing production in response to the mortality and morbidity of workers are very limited. In addition, the adaptation of other economic sectors, such as industry, mining and urban-based services, to the epidemic often involves shifting the burden of the epidemic elsewhere. That “elsewhere” is mostly rural households that are food producers. In addition, the impact of the epidemic is felt throughout rural livelihood systems. Summarizing its research on the impact of HIV and AIDS on land and production in eastern and southern Africa, FAO concludes: “The impact of the disease is systemic: HIV/AIDS does not merely affect certain agriculture and rural development sub-sectoral components, leaving others unaffected. If one

component of the system is affected, it is likely that others will also be affected, either directly or indirectly” (FAO 2001, p. 22).

Box 2.3

Increasing the health workforce: experiences with substitute health workers

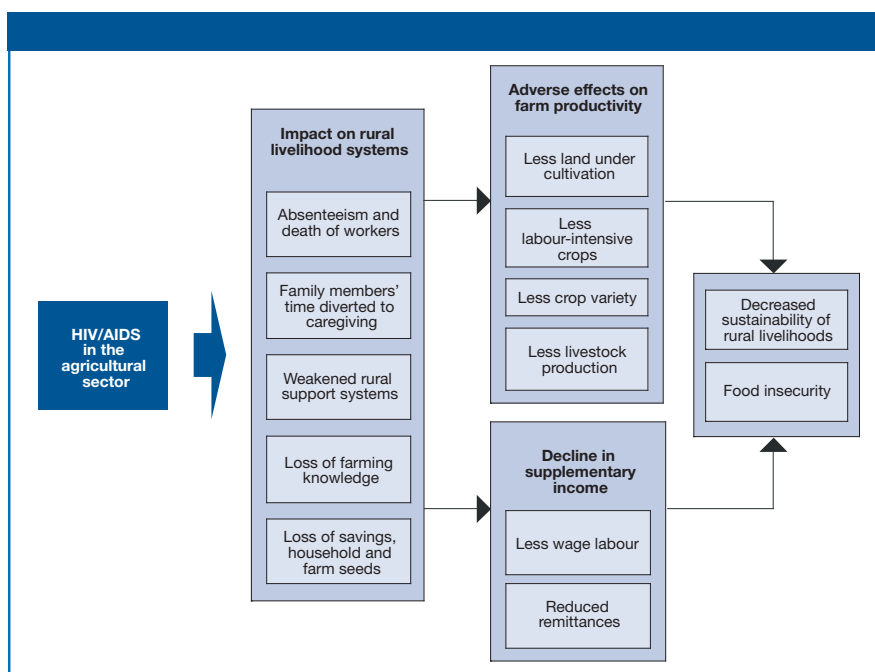
Substitute health workers take on some of the functions normally reserved for internationally recognized health professionals, such as doctors, pharmacists and nurses, but usually receive shorter preservice training and possess lower qualifications. Allowing and training such cadres is not new. Mozambique (post-civil war) and Ghana (post-independence), for example, both established fast-track training programmes for health workers to carry out specific tasks in a severely understaffed but expanding health care infrastructure. Today countries are exploring how substitute health workers can deliver health care (see table).

Substitutes have been found cost-effective, and some studies comparing them with doctors show little differences in patient outcomes.

Substitution type	Examples
Indirect substitution:	<ul style="list-style-type: none"> • Nurse anaesthetists. • Enhanced midwives’ roles in Ghana. • Enhanced abortion management roles for nurses in South Africa and Zambia.
Delegating some professional tasks, such as substituting a professional with an existing but different professional, changing the scope of practice of another cadre to cope with delegated tasks.	
Direct substitution:	<ul style="list-style-type: none"> • Clinical officers and medical assistants in Ghana and Malawi. • Assistant medical officers and surgical technicians in Tanzania and Mozambique.
Delegating most professional skills, such as substituting an existing profession with a newly created cadre. Both cadres may coexist, with overlapping professional functions.	
Intra-cadre skills assignment or delegation:	<ul style="list-style-type: none"> • Diploma ophthalmologists, psychiatrists, ear, nose and throat specialists, West African Health Community. • Theatre and intensive care nurses without formal training in Ghana.
Delegating some specific specialist tasks to professionals with less training in the same profession.	
Delegation of nonprofessional tasks:	<ul style="list-style-type: none"> • Health aides and pharmacy assistants in Ghana. • Frequent in many rural areas throughout Africa.
Delegation of non-professional tasks to relieve professionals of unwarranted workload.	
Informal substitution:	
Using less trained cadres, especially in remote and rural areas, to carry out tasks in the absence of the appropriately recognized professional.	

A growing body of evidence demonstrates that HIV and AIDS are already having a significant and adverse impact on rural livelihood strategies. Central to rural livelihoods is access to land. This too is impacted by the epidemic, which has repercussions for different forms of land use, various types of land tenure and land reform projects, inheritance practices and norms, the functioning of land administration systems and the land rights of women and orphans and poor people in general (figure 2.8).

Figure 2.8
How HIV/AIDS affects rural livelihoods



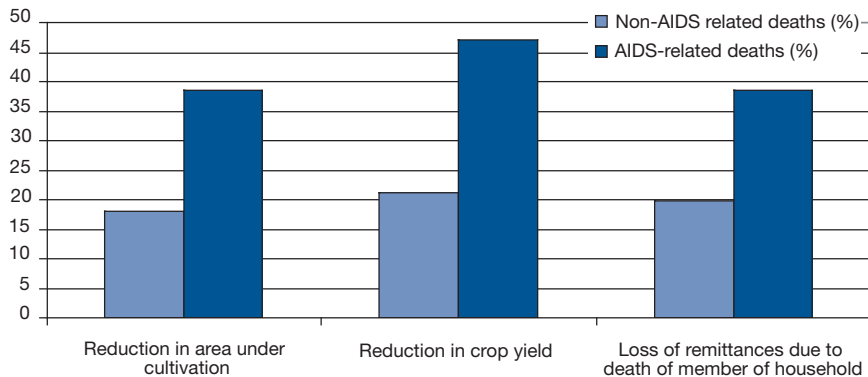
The FAO estimates that between 1985 and 2000, 7 million African agricultural workers died from AIDS (FAO 2003). Mortality of farm workers has not diminished since then. By 2020 the nine most severely hit sub-Saharan countries may lose 13%–26% of their agricultural labour force to AIDS (CHGA 2004a). This is a potentially devastating impact on agricultural sectors that are unable to adapt, notably poor smallholders. The effects on labour availability, agricultural production and productivity, have received more attention than other effects on agriculture (CHGA 2004e). But the loss in lives is far more than the loss in labour force. Those dying are not merely agricultural workers. They are household heads, mothers and fathers of young children or adolescents, caregivers for the old and sick, transmitters of agricultural and livelihood knowledge and skills

and custodians of social safety nets. So they are not only producers—they are also those reproducing the future labour force, endowing it with skills, knowledge, entitlement systems and safety nets.

That makes it critical to analyze labour-related impacts of HIV and AIDS on chronic rural poverty, including rural men’s and women’s access to food and health services. Governments and donors need to consider how household productive and reproductive capacity can be sustained and enhanced in severe HIV epidemics.

The research commissioned by CHGA indicates that HIV and AIDS are driving an ongoing restructuring of rural livelihoods at several levels. In some countries heads of households who were chronically ill reduced the area of land they cultivated by as much as half, reducing crop production and food availability (Drimie 2002; CHGA 2005d). In communal areas of rural Zimbabwe maize output by households that experienced a death from HIV/AIDS declined by nearly half over a short period, and in some households by more (Kwaramba 1997). Similar evidence comes from Swaziland.

Figure 2.9
AIDS-related deaths reduce crop production and household incomes in Swaziland



Source: Muwanga 2002.

Production lowered by the loss of household labour often carries over for one or more years after a death. Some households, especially those already short of household labour, may never recover their previous production, and many families hit by the losses of income may be forced to disperse. For communities the epidemic is shifting the composition of agricultural output from commercial crops towards food for consumption, reducing incomes and employment

(CHGA 2005d). While this may ensure household food supplies in the short term, this adaptation represents a reversal of agricultural production. If replicated at scale, it has deleterious long-term effects on the growth of output, incomes and foreign exchange earnings—on development itself (Jayne and others 2005).

The epidemic can have a lasting impact on household incomes and well-being. A comparative study on rural and urban households in one province in South Africa found households affected by HIV/AIDS had incomes 40%–50% lower than unaffected households (Booyesen and Bachmann 2002). Households in Zambia affected by HIV/AIDS were found to take up to 18 months to stabilize, with a new equilibrium income about half the previous income (CHGA 2005d). Such limited resilience is likely to increase vulnerability to other shocks.

Smallholder agricultural production in sub-Saharan Africa is chiefly a female activity. The gendered nature of the HIV/AIDS epidemic interacts viciously with this existing bias, greatly increasing the burden borne by women and girls. Always, females have the major responsibilities for caring for sick relatives, taking time away from food production, marketing and other pursuits. Female-headed households caring for a person living with HIV/AIDS in northern Ethiopia were likely to sell farm and household equipment to get cash, primarily to buy food. In many cases the women were also caring for orphaned children (CHGA 2005d).

As rural incomes decline, a major driver of HIV/AIDS—migration—is enhanced. In Ethiopia declining rural incomes from a collapse in the price of cash crops was the main factor behind the migration of young men in search of employment in urban areas, which increases the chances of sexual partners at both ends engaging in commercial or transactional sex (CHGA 2004e) and increases the risk of HIV transmission from urban populations to rural migrants. CHGA research in the Samburu District of northern Kenya found an 18% prevalence rate—with one of the main factors the return of young migrant men casually employed in security work (especially in the tourist industry) and in the armed forces (CHGA 2005d). The return of infected workers to their rural homes places additional burdens on their households, especially the women and girls in those households. About 20%–30% of those HIV-positive people in one division of Nyeri, Kenya, returned to their rural homesteads when they could no longer work (CHGA 2005d), again increasing the burden on rural households with scant financial resources (Ainsworth and Semali 1995; Drimie 2002).

AIDS weakens private sector competitiveness and profitability

HIV/AIDS is increasing the costs of doing business (CHGA 2005c). Larger, formal sector firms are absorbing, to some extent, the costs of lowered productivity due to employee absenteeism, medical insurance and death benefits. Analyses of mining firms in southern Africa show that HIV/AIDS costs account for 2.5% of company payrolls, a share likely to grow. Other studies note the “AIDS tax” on businesses—the higher costs of labour—ranging from 1% to 10% of annual profits (Rosen and others 2002; Kahn 2004). As the costs of hiring, training and benefits increase, firms may be less willing to hire as quickly or as many. In Botswana and South Africa very conservative estimate is that the level I (individual) costs of HIV/AIDS are adding 1%–6% per cent to company labour costs (figure 2.10). This estimate does not take into account the additional organizational costs incurred from an increased epidemic within the firm or changes in demand as customers are affected by AIDS (level II or level III in figure 2.10). Research on the costs of AIDS to business from other African countries is sparse but has generated similar findings.

Even small increases in the cost of doing business affect the competitive position of companies, and investors are concerned about the costs of doing business in Africa. Already, established companies in South Africa are including estimates of the impact of HIV and AIDS in their financial forecasting. Outside the company itself, the impact of HIV and AIDS on suppliers also makes inputs more expensive. The wider social impact also reduces the number of people who can afford to purchase goods and services. A South African furniture manufacturer projected an 18% reduction in its customer base by 2010 (Whiteside and Sunter 2000). While the gloomier economic predictions have not materialized, business in the most highly affected countries is still conducted under a dark cloud of uncertainty about what the future may herald.

Small businesses that rely on only a few key employees—the majority of firms in Sub-Saharan Africa—may collapse. A study of small businesses in two districts in Kenya found that the death of the business owners left the enterprises in the hands of people with little or no experience. Large companies, by contrast, have in many cases found it more profitable to keep skilled and semiskilled employees on the payroll, paying for some of the costs of antiretroviral therapy treatment, rather than absorb the costs of their loss and replacement.

Figure 2.10
Impact of HIV/AIDS on businesses

	Decreased Productivity	Increased Expenditure
Level I: Individual (From each employee with HIV/AIDS)	<ul style="list-style-type: none"> • Reduced on-the-job productivity • Increased leave and absenteeism • Loss of skills and tacit knowledge • Division of supervisor's time • Increased staff turnover with vacancy until replacement is hired • Lower productivity while replacement learns the job 	<ul style="list-style-type: none"> • More benefits claims • Higher costs for medical care and insurance coverage • More demand for medical assistance and VCT • Increased funeral costs • Costs of recruiting and training replacement workers
Level II: Organizational (From many employees with HIV/AIDS)	<ul style="list-style-type: none"> • Diversion of senior managers' time • Production disruptions • Loss of workforce morale, cohesion and experience • Deteriorating labour relations 	<ul style="list-style-type: none"> • Increase in insurance premiums • More accidents due to ill and inexperienced workers • Litigation over benefits, dismissals etc. • Higher cost for capital, because investment in company is riskier
Level III: Market (From high HIV prevalence in society)	<ul style="list-style-type: none"> • Potentially reduced demand for products due to smaller target population, shifts in consumer preferences, less disposable income 	<ul style="list-style-type: none"> • Higher cost of inputs because suppliers' labor costs are rising • Rising wages for skilled labor • More security needed due to breakdown in civil society • Higher costs of transactions with government and labour

But even unskilled jobs require skills and knowledge of routines and processes. A flower plantation in Kenya that relies on casual labour for much of its field operations reported that productivity and quality were compromised by HIV-related absenteeism and turnover. New workers required many hours, if not days, to become familiar with the company's techniques.

Why the slow private sector response?

Many large businesses, most of them multinationals as well as a few government-owned parastatals, have begun to implement aggressive HIV and AIDS prevention and treatment programmes for employees—and, in some cases, dependants as well. Trade unions are enthusiastic partners in these initiatives. But in-depth studies of the effects of HIV and AIDS on enterprises, including studies commissioned by CHGA, show little preparation for the changes that the HIV/AIDS epidemic entails. Participants from the CHGA Interactives reported a general

denial of the spread of HIV/AIDS among employers and employees in privately owned industries and businesses.

There is also ignorance about the devastating impact of HIV/AIDS at the enterprise, sector and macro levels—and managers commonly fail to appreciate the link between higher medical costs and HIV/AIDS. Private sector health surveillance is infrequent, and there is too little knowledge sharing among companies of workplace programmes, losses or costs. The lack of information is perpetuating perceptions that HIV/AIDS remains a health issue for individuals and public health systems, not an enterprise issue. And business leaders of small firms, or firms struggling to survive in a sometimes unstable political and economic environment, are compelled to adopt a short-term view. CHGA Interactive participants and other private representatives have reported a willingness to act, but cite the lack of knowledge on what to do and how to go about doing it as reasons for the slow private sector response (box 2.3).

Ongoing studies on how public-private partnerships (PPP) enhance national response, including treatment scale-up, in Mozambique, Ghana and Burkina Faso will offer better understanding of the role of the private sector. These studies were commissioned in 2008 by ECA under the Treatment Acceleration Programme (TAP), an initiative jointly led by the World Bank, WHO and ECA, in collaboration with Ministries of Health in the three countries.

Public-private burden sharing

Many companies in Africa are addressing HIV/AIDS by (intentionally or unintentionally) “shifting the burden” to government, nongovernmental organizations and—above all—to households (Rosen and Simon 2003). They do this by cutting or limiting employee benefits, changing the structure of employment contracts, outsourcing unskilled jobs, mechanizing tasks that previously required human effort and carrying out selective retrenchments or involuntary medical retirements. Many of these practices are responses not only to HIV/AIDS but also to the competitive pressures of globalization.

Without public health infrastructure and social safety networks, the investment environment is less attractive. The incentives for private firms to accept social responsibility, invest in workplace programmes and engage in public-private partnerships must be made clear. But participants at the CHGA Interactive in Ghana on the World of Work pointed out that it was unrealistic to expect enterprises to fully fund social security or sustain employees who have to retire early because of AIDS. And public-private partnerships often are not practical. They frequently require companies to focus outside their core activities and take up new skill sets. Procedures for gaining access to public money are cumbersome.

“Putting workplace programmes in place is not an expense—it is an investment.”
Coca-Cola representative,
CHGA Interactive,
Ghana.

And tax incentives from the government to improve corporate social responsibility are poor or lacking.

Box 2.4

Recommendations for workplace policies and programmes

The CHGA Interactive discussion of workplace policies on HIV/AIDS highlighted the following policy principles:

- Ensure non-discrimination, recognize gender inequality, recognize youth, secure a healthy work environment, prohibit social exclusion and ensure continuation of employment.

For workplace programmes on HIV/AIDS:

- Invest more money in prevention and mitigation of HIV/AIDS and offer programmes that include testing and treatment.
- Ensure that programmes are comprehensive and complemented with voluntary counselling, care and support. Counselling services at the workplace need to encourage more staff to go for voluntary testing to prevent the spread of infection.
- Promote the use of condoms and distribute them in the workplace.
- Mainstream HIV/AIDS at all levels in the institution or company and in all training programmes. Top management should repeatedly talk about HIV/AIDS, and the topic of HIV/AIDS should regularly come up in company meetings.
- Promote social dialogue, develop an HIV/AIDS educational programme and use peer educators to reduce stigma and discrimination in the workplace. If possible, involve people living with HIV/AIDS.
- Ensure that supervisors, managers and union representatives are properly trained on HIV/AIDS.
- Empower people in the enterprise in charge of implementing policy directives on HIV/AIDS. Give desk officers responsible for HIV/AIDS well defined responsibility and authority.
- Begin human resource planning and develop retention strategies to keep staff. Change training and work definitions to increase the flexibility and adaptability of the work environment.
- Develop and enforce an ethical code on HIV/AIDS. Establish a system to redress misconduct and violations of policies for all employees.
- Develop proper policy tools and mechanisms for reviewing, evaluating and monitoring programmes. Make sure that data and experiences are forwarded to national institutions on HIV/AIDS and shared with other businesses.

Small and medium-size enterprises, often forced to opt for focus on the short term, may not be able to afford extensive workplace programmes on HIV/AIDS

and remain competitive. Participants at the CHGA Interactive encouraged more efforts to pool resources and achieve economies of scale for HIV/AIDS programmes. Networks and coalitions of private firms can reduce costs and facilitate donor support and public funding.

Some initiatives are capital-intensive, while others are feasible with little or no funding (box 2.5). The costs of antiretroviral therapy are sometimes shared with employees, and some enterprises are extending care and support to families in ways potentially important for ensuring wider access to antiretroviral treatment and support. Several participants at the CHGA Interactive felt that much can be achieved even if antiretroviral therapies remain difficult to access.

Private enterprises often take a technical standpoint when developing HIV/AIDS programmes, neglecting the emotional trauma and stigma associated with the disease. CHGA findings highlight the benefits of comprehensive programmes that provide more care, counselling and support to employees. This includes enhancing the health and nutritional status of people living with HIV, which may delay the onset of AIDS. It is also recommended that businesses establish more partnerships with civil society groups to incorporate counselling, care and nutritional therapy with treatment.

Box 2.5

Low-cost initiatives against HIV/AIDS

The participants at the CHGA Interactive on the World of Work identified several low-cost initiatives that are easy to implement immediately:

- Distribute and promote the use of condoms.
- Appoint peer educators.
- Offer voluntary counselling services.
- Address prevention, stigma and discrimination through social dialogue and educational programmes.
- Offer training on HIV/AIDS to management.
- Repeatedly refer to HIV/AIDS in meetings.

The role of governments in enabling private sector response

Governments are regulators of the private sector and providers of social services. They need to support an effective response to HIV and AIDS for all actors in employment, protection against discrimination, hiring, retention, access to benefits and so on. But they have offered little policy or regulatory guidance to help enterprises and their employees deal with HIV and AIDS—or help plan for

labour needs and the costs for employers and employees. HIV/AIDS adds to the level of uncertainty in an economy, as firms may be unsure as to whether they will be able to secure the necessary supply of skilled labour in order to maintain production, given that HIV/AIDS is anticipated to reduce the labour force. Uncertainty is heightened when there is a lack of a clear policy direction on how the government or firms will deal with AIDS.

The role of the private sector in national policy must be negotiated and designed. Methods focusing on social inclusion and social mobilization are central to the success of all policies and programmes, as is building partnerships across sectors within a coordinated national framework. Ensuring the full and active involvement of employers and worker organizations in country-coordinating mechanisms and national action plans can widen the national response and ensure the full representation of labour and employment. But the benefits from cross-sectoral initiatives remain suboptimal. Participants at the CHGA Interactive called for expanded efforts to strengthen the capacity of partners to reap the full potential of these schemes.

Several participants at the CGHA Interactive reported successful public-private partnerships and workplace policies and programmes. Some company representatives cited financial motives for acting—convinced that providing treatment is a good investment. Others emphasized humanitarian reasons and social responsibility. They requested more public-private partnerships and more HIV/AIDS workplace policies and programmes. Increased corporate social responsibility and proactive government will allow the private and public sector to negotiate a balance in sharing the burden of HIV/AIDS.

Economic growth will slow, and poverty will increase

With few notable exceptions, the experience of Africa indicates that there was little pressure to mount a strong public health response and mobilize society at early stages of the epidemic. This delay allowed the infection to spread gradually throughout the population and its cumulative impact to steadily build without commensurate response. In countries with low prevalence of HIV, the risk of sharp increases remains real. These countries should respond now, rather than wait for the epidemic to become generalized with its disastrous impacts on society and the economy.

Box 2.6

Finding inroads for HIV/AIDS programmes in the informal economy

The informal sector makes up two-thirds of many African economies, and in some countries even more. It lacks social protection arrangements and its workers receive little or no training, and often work under unhealthy or unsafe conditions.

Discussions at the CHGA Interactive on the World of Work in Ghana outlined four inroads into the informal economy:

- The vulnerabilities of the informal sector need to be addressed in national AIDS strategies, and the impact of HIV/AIDS on the informal sector should be included in national impact assessments.
- The informal economy needs to be better regulated, and formalizing informal businesses facilitated. This would strengthen the rights and social protection of workers who normally fall outside government regulation and assistance.
- Associations, nongovernmental organizations and other efforts to organize the informal sector should be supported, increasing the opportunities for funding and facilitating programmes of prevention and care.
- Community outreach programmes should be implemented in vulnerable areas, perhaps strengthening communities rather than workplaces.

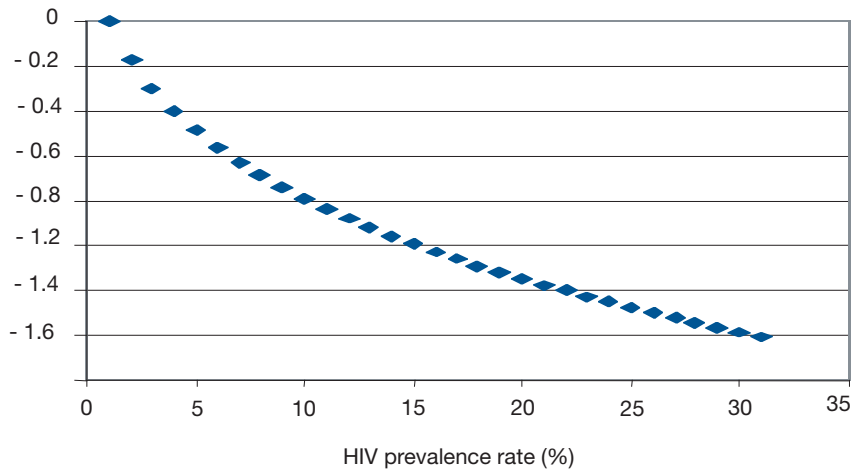
For more than a decade analysts have sought to measure the macroeconomic impacts of HIV/AIDS. Models have been refined and new data generated, but uncertainty remains about such a broad measure. Using modelled estimates, one analysis of the macroeconomic impact finds, on average, that the per capita GDP of African countries grows by 0.8 percentage points less per year than if HIV/AIDS were not present (figure 2.11) (Bonnel 2000). While small in any one year, the effect grows over time. Other studies, using conservative assumptions, conclude that Africa's mortality changes due to HIV/AIDS imply an economic cost equal to 15% of 2000 GDP (Bloom, Canning and Jameson 2004).

The main source of socioeconomic losses is the reduction in output due to rising levels of adult morbidity and mortality, and the reduction in human capital that undermines productive capacity throughout the economy. Development is undercut by the loss of human resources everywhere, the deteriorating performance of key institutions (revenue departments, central banks, legal authorities and ministries of education and health) and the fragmentation of vital economic networks. Investment declines as households, businesses and governments increase their recurrent expenditure to compensate for losses and disruptions because of sick or dead individuals. For example, AIDS-related admissions to South Africa's public hospitals consumed 12.5% of the national public health budget in 2001/02, squeezing out other health priorities (Guthrie and Hickey 2003).

Figure 2.11

HIV prevalence of 10% reduces the growth of GDP per capita by 0.8 points a year

Annual GDP per capita growth (%)



Source: Bonnel 2000.

It is important to stress that although recent data indicate that HIV prevalence has stabilized and even begun to fall in many countries, the major impacts of HIV and AIDS will be with us for a decade or more. Mortality due to AIDS has not yet peaked. Reductions in labour supply will put downward pressure on output, an impact compounded by the lower productive efficiency associated with ill health and skill shortages. The declines in economic productivity will take place against a background of rising social service expenditure. While some increases in government budgets can be met by increased external aid, household budgets lack comparable sources of compensatory assistance. Most African countries lack the kinds of social protection schemes including cash transfers to affected households. These adverse economic trends reduce the ability of governments to raise tax revenues. There may be some savings from slower population growth—such as smaller primary school age cohorts—but the overall effects of HIV/AIDS add to the pressures for deficit spending by governments, and for greater dependence on official development assistance.

The ability of governments to compensate for the negative impacts of the epidemic on development strategies is hindered by the very forces of HIV/AIDS itself. Economic growth that could expand national financial resources and employment is likely to slow in the coming years. Savings and investment rates are likely to decline, especially in families and businesses affected by HIV/AIDS.

Along with the macro-economic impacts are the underlying conditions of labour supply. Job losses impoverish households and communities. A 2003 study in eastern Zimbabwe found that about four of five people who died were the household's primary income earners, and 60% of them "lost their jobs during their illness. In addition, one in seven caregivers had to give up employment to care for a sick family member, and about one in four households had to relocate soon after the adult's death" (Zimbabwe National AIDS Council 2004, p. 15).

Because public health, welfare and related services are often weak, affected households and communities have had to absorb the financial burden of the epidemic. In strictly economic terms there are substantial development costs for societies associated with "coping." Time and energy that could go into more directly productive activities are diverted to caregiving, to funerals and to support for families and orphaned children.

Given the weakness of most African states in providing care and support, responses have focused on encouraging families and communities to support those in need. This diverts resources from other uses, but there has been little choice given the weakness of state welfare systems in most countries. The necessary response has two components. One is state activity to directly support those in need today. Social protection mechanisms including direct cash transfers through pensions, child support grants, disability and chronic illness grants and emergency relief assistance, are increasingly recognized as an essential mechanism of poverty alleviation, and are especially relevant for ameliorating the adverse impacts of HIV and AIDS on households. The second is facilitating community-based systems for the support of families and communities in coping effectively with the needs of those most affected by HIV/AIDS, as voiced in briefings in Botswana and Ethiopia (Topouzis 2004; CHGA 2005c).

There are signs that ministries of finance are beginning to absorb the realities of the epidemic's socioeconomic impact. National strategic plans are being formulated, outlining a multisectoral response from all ministries and mobilizing both the private sector and the whole of civil society. But only in a limited number of countries are attempts being made, even in the broadest terms, to estimate the probable macroeconomic and sectoral costs and human resource implications—analysis needed for integrating a comprehensive financing strategy into the multisectoral plans.

National strategies may be in place in most countries now, but there remain the challenges of operationalizing them and securing the required resources. Too often the many plans are largely unimplemented and under-resourced, focusing heavily on centralized control. The plans rarely focus on how to respond to the human capital losses sustained across many sectors.

Conclusion

Taken together, the findings of CHGA point to the conclusion that in parts of sub-Saharan Africa, the HIV and AIDS epidemic is one of the biggest single obstacle to the achievement of the poverty reduction targets and the sustainable development goals agreed on at the UN Millennium Summit. The HIV and AIDS crisis thus presents a major challenge to poverty reduction strategies and efforts by governments, donors and the international community. Insofar, as poverty itself is a complex and multi-faceted phenomenon that encompasses various types of deprivation (in addition to income and consumption deficits), it is important that each country examines the role of the HIV and AIDS epidemic in supporting or exacerbating other essential components of poverty, such as poverty of access to public goods and services (e.g. education, healthcare, clean water and sanitation); poverty of private assets (e.g. physical labour, land, livestock, food); and poverty of social relationships (e.g. discrimination, social exclusion and lack of mutual support).

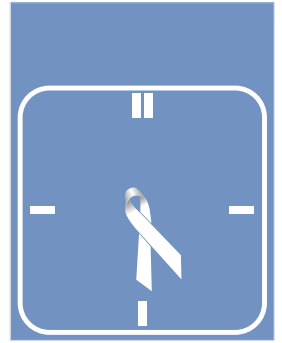
There are no simple solutions to these mutually reinforcing phenomena. But the same symbiotic relationship, suggests that any progress in reducing poverty levels will also provide a stronger foundation for efforts to overcome AIDS, while success in reducing HIV prevalence will also help to remove an important obstacle to greater productivity and growth. Consequently, it is essential that the multiple impacts and consequences of the epidemic are factored into development planning frameworks, policies and programmes. Of particular concern is the need to ascertain whether current patterns of development planning respond adequately and are on the right track.

Poverty reduction strategy papers and policies (PRSPs), a World Bank initiative complementary to HIPC, can be used as a tool to mainstream HIV/AIDS into development planning. PRSP documents set out a country's approach to poverty reduction through specific planned policies and programmes and the associated external financial needs. It allows for an integrated approach based on national ownership of development goals and plans. The PRSP serves the donor community as a framework and guide for technical and financial support, and it is important to note in this regard that some PRSP documents have included financial commitment for HIV/AIDS programmes.

Based on reviews and on-going analyses by UNAIDS and UNDP, the PRSP process has not, however, been effective so far in helping countries to mobilize additional resources to control HIV, and this represents lost opportunities. Importantly, also, PRSP documents include little analysis of the relationship between HIV/AIDS and poverty, according to a review of 25 full and interim PRSP documents prepared by sub-Saharan African countries. In addition, they

do not for the most part include or reflect main strategies of the national AIDS plans of the countries concerned—these plans are often separately funded and organized with relatively little coordination with overall national poverty reduction strategies. Furthermore, most PRSPs do not set out clear estimates of the resource implications of responding to the HIV/AIDS crisis; nor do they make use of HIV/AIDS prevention and care goals and targets as indicators for monitoring poverty. Such estimates and targets would help to clarify the external support needed to address the epidemic in a given context. As a whole, PRSPs have not adequately addressed public health issues as development problems, which goes far to explain why major donors have not used this particular planning instrument to channel resources to support national efforts to control AIDS and reduce poverty.

Acknowledgement of these shortcomings led to the recommendation made by a Global Task Team (GTT) set up by UNAIDS in 2005 for the international community, led by the World Bank and the UNDP, to assist developing countries to make better use of the PRSP to mobilize financial and human resources to address HIV/AIDS and public health problems. The GTT made it clear that it was the responsibility of the international community to support efforts by poor countries to integrate HIV/AIDS concerns into PRSPs.



3. Improving prevention strategies

Chapter at a glance

Prevention is the key to halting the progress of HIV in Africa. While the story of AIDS prevention in Africa thus far is not encouraging there has been progress on several fronts. First, due to sustained advocacy efforts, growing awareness of the devastating impact of the epidemic has translated into political commitment to confront HIV and AIDS. Second, heightened political awareness has also translated into greater commitments in the resources available for implementing expanded HIV and AIDS treatment and prevention programmes. However, much more needs to be done: reinvigorating prevention must be the priority.

And third, after twenty years of rising prevalence, recent data shows that prevalence levels in Africa have stabilized and in many countries are beginning to fall, albeit slowly—see chapter 1. HIV prevalence in a population is a function of the balance between AIDS mortality and new infections (incidence). A stabilized prevalence figure is therefore not necessarily good news—it can reflect the fact that mortality of people with AIDS is high, in part because of the absence of treatment. A prevalence rate that stabilizes at a high level can mean that a large number of new infections is replacing a roughly equal number of people who are dying of HIV/AIDS. Today's stable prevalence figures are the product of high death rates, but also slowly decreasing incidence rates. New infections are reduced, but not by enough to indicate that the end of the epidemic is within sight. Much more needs to be done, particularly in the way prevention programmes are structured, implemented and monitored.

Current prevention programmes have had disappointing impacts, in large part because of the politicization of prevention, and in particular the controversies surrounding the promotion of condoms. Despite the proven efficacy of condoms as a mitigation instrument against HIV infection, some funding for prevention is focused on abstinence. Yet in many cases the argument for abstinence is motivated more by political opinions and religious beliefs, than evidence of efficacy on the ground. Abstinence is an important component of HIV prevention but needs to be promoted alongside a range of other prevention measures.

It is imperative to seek to understand the limitations of existing policies and programmes. On this basis we can ascertain how to affect changes to increase their efficacy. There is not a simple or single way that this can be done, as the internal conditions in each country are unique. A key lesson is that “one size does not fit

all” and that each of the different components in an HIV/AIDS programme, as well as the balance between prevention, treatment and impact mitigation will be specific to each country. The specific local cultural, political and material circumstances will influence the content of any particular programme. Furthermore, each country will need to break down its national epidemic into its geographic, social and economic components, in order to frame and target national prevention programmes in ways that should increase their efficacy. This must take place in an environment that promotes the possibility of open and honest discussion of sexuality and dying by confronting some uncomfortable cultural and societal truths.

Introduction

There are those both in Africa and outside who would argue that behavior change is “just” a matter of “self-control”, an individual moral choice. But while individual decisions undoubtedly enter into the equation, how far a person can really make a choice depends on his or her social and power position and the circumstances in which he or she lives his or her life. It also reflects the comparative status of men and women, the financing of education, the way that males see their role, and many other social and economic factors. For example as long ago as 1993, it was clear that in The Gambia sex workers were able to make three times more per day than women engaged in informal sector activities (Pickering and Wilson 1993). In fact, sex workers earned as much as senior civil servants! Thus sex work in The Gambia was a choice of occupation, “freely” made, although the “freedom” of these choices was constrained by levels of education and access to resources. Indeed some successful business women used sex as a way of periodically accumulating capital to expand their businesses.

This poses an important question. We must urgently confront those who would argue that simple sexual behavior change is “the” answer to HIV prevention. The answer to this is not straightforward because it involves another apparently easy question: “what is sex”? Today in most western societies “sex” is romanticized, commoditized and teased out from its social, economic and cultural context. In many African societies, while this most intimate of personal relations of course has a romantic content, it is also frequently tied to deep cultural beliefs about the importance of family, lineage, purity, danger and religion. For example, while ritual cleansing of widows has reportedly declined in parts of Africa, several participants of CHGA sub-regional consultations explained that cleansing still takes place in many countries – but the man takes a partner who is outside the family, thus avoiding intercourse with the widow of a man who may have died from AIDS while meeting the community’s expectations as to what it is correct to do morally and ritually. And furthermore it is women who also demand that the cleansing takes place – so that they will be ritually purified after the death of their husband.

Successful prevention programmes are the key to halting the progress of HIV/AIDS in Africa. The challenge remains to more fully understand what prevention strategies work with what people in what settings. A central conclusion of the CHGA consultation on prevention is the reality that one size does not fit all. In the words of a participant, “There is no single model of prevention that neither

works nor works everywhere.” The balance among prevention, treatment and impact mitigation needs to be specific to each country and audience. Local cultural, political and material circumstances need to influence the content of any programme. And countries need to separate the epidemics into their geographic, social and economic components to increase the efficacy of national prevention programmes.

Learning from Africa’s positive achievements: Senegal and Uganda

Senegal has been able to keep HIV/AIDS at a low level for two decades. In Uganda prevalence declined by half, or more, with the turnaround beginning in the late 1980s. Thus, there are positive and effective experiences from within Africa that offer lessons for controlling the epidemic. Both countries have done a good job of using a combination of political, social and behavioral initiatives to achieve their successes.

Factors that were important in Senegal’s efforts include:

1. *An early and continuous response to the epidemic by national leadership*

The National AIDS Control Programme was established in 1987 and sentinel surveillance of HIV began immediately. The government, including its military medical facilities, invested in scientific research into HIV and it was a Senegalese scientist, Dr. Souleymane Mboup, who first isolated the HIV-2 virus. Presidential and sectoral leadership have been important in maintaining openness about HIV/AIDS, in building cross-sectoral involvement, and assuring that financial and other resources are provided for prevention services.

2. *Building upon national systems of collaboration and communication*

Political leadership laid the groundwork for a productive dialogue with religious and other community leaders. A long and active tradition of community participation in health and development was mobilized in support of AIDS prevention activities. Maximum use was made of existing structures to provide information and services to communities at high risk, especially sex workers. A pragmatic approach to public health—emphasizing prevention and the provision of essential services—provided the foundation for strengthened efforts at STD control and the widespread promotion of condoms. In addition, a long experience with democracy and press freedom strengthened open discussion about HIV/AIDS.

3. *Active involvement of community, political, and religious leaders*

As early as 1989, the government collaborated with religious organizations to discuss its AIDS prevention strategy. In 1995, a national conference resulted in a proclamation of support for HIV prevention and a partnership between health care providers and both Christian and Muslim religious leaders in the fight against AIDS. Over 200 NGOs and some 400 women's groups, totaling as many as 500,000 members, are active in HIV prevention and providing care. Their presence strengthens both prevention messages and services.

4. *Prevailing sexual norms, reinforced by regular prevention messages*

Religious and cultural norms mean that premarital sex is relatively less common in Senegal than in other countries in the region. For women in urban areas, the probability of first sexual encounter before the age of 20 years is 20 percent, compared with 30 percent or 40 percent in neighboring countries. Where non-marital sex occurs, men and women are more likely to use condoms than peers in other countries. Sex education has been part of school curricula since 1992.

5. *Maintaining prevention services*

Condom promotion is a major component of the National AIDS Control Program strategy. Condoms are distributed free to commercial sex workers, patients with sexually transmitted infections, youth, and the military and use is reported to be high. Some sex workers are officially registered and required to undergo monthly STI tests and regular health checkups and receive treatment for curable sexually transmitted infections. This system of registration has provided a framework to approach this target group with educational and health campaigns. STI services were expanded and awareness of the links between STIs and HIV grew among the populations.

In Uganda, factors that have been important include:

1. *High-level political support with multi-sectoral response from early in the epidemic*

The national political leadership provided a proactive commitment to prevention that has continued to the present. In face-to-face interactions with Ugandans at all levels, the President emphasized that fighting HIV/AIDS was a patriotic duty requiring openness, communication, and strong leadership from the village level to the State House. Openness extended to regular and candid national media coverage of all aspects of the epidemic. In 1986, Uganda established a National AIDS Control Program (ACP), which launched an aggressive public media cam-

paign that included print materials, radio, billboards, and community mobilization for a grass-roots offensive against HIV.

2. *An active response by numerous civil society organizations, especially NGOs, CBOs and religious groups*

The AIDS Support Organization (TASO) was organized back in 1987, and has advocated against discrimination and stigma while pioneering a community-based approach for care of PLWHAs. Catholic mission hospitals were among the first to develop AIDS care and support programs in Uganda. In 1990, the Islamic Medical Association of Uganda piloted an AIDS education project in rural Muslim communities that evolved into a larger effort to train local religious leaders and lay community workers. From the beginning, figures in the media and role models—most famously the singer Philly Lutaaya—brought HIV and AIDS into the public realm as a topic of discussion.

3. *An appreciation by people that HIV/AIDS was personally relevant*

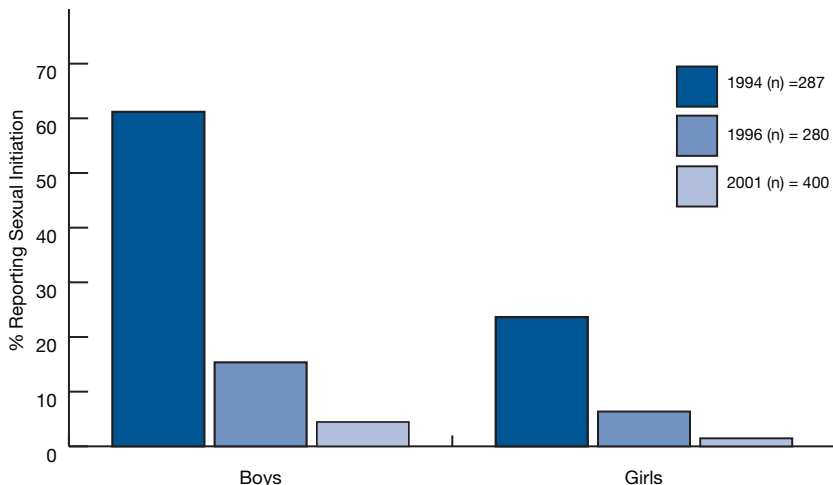
Inter-personal experiences with people living with HIV/AIDS and open discussion within personal communication networks for acquiring AIDS knowledge effectively personalized risk and resulted in greater actual behavior change, especially among young people, many of whom were caregivers for relatives with AIDS. Ugandans are relatively more likely than people in Kenya, Zambia, and Malawi, for example, to learn about HIV/AIDS through friendships and other personal networks. Uganda has been marked a delay in sexual debut among youth (figure 3.1) and many believe that this is a direct outcome of this personal appreciation of the risks of HIV.

4. *Behavior change communication (BCC) reached both general populations and key target groups*

Uganda's approach to BCC has two important components. One is the message. Rather than stressing a single approach to HIV prevention, it included three—abstinence, being faithful, and using condoms, the so-called “ABC” approach. The other is the method. BCC relied extensively on communication that was community-based, face-to-face, and culturally appropriate and flexible to inform different groups. AIDS awareness and education was channeled not only through health personnel, traditional healers, and traditional birth attendants (TBAs), but influential people normally not involved in health issues such as political, community, and religious leaders, teachers and administrators, traders, leaders of women's and youth associations, and other representatives of key stakeholder groups. BCC interventions reached not only the general population, but also key target groups including female sex workers and their clients, soldiers, fishermen, long-distance drivers, traders, bar girls, police, and students, without intensifying stigma.

Figure 3.1

Delayed Sexual Debut Among Primary School Pupils (13-16) Following Information Education and Communication (IEC) (Soroti District, Uganda)



Source: *The Effects of the Katakwi/Soroti School Health and AIDS Prevention Project, African Medical and Research Foundation (AMREF) Report, August 2001.*

5. *At least formally, women's positions in society were enhanced*

There was a strong emphasis on empowerment of women and girls. The country's President and his political party have attempted to expand the power of women, including giving them a greater political voice. By law, women make up at least one-third of members of Parliament. At the same time, communication programmes promoted changes in men's sexual behaviors (for example, "zero grazing"). For this and other reasons, there was a decline in casual sexual relationships. Also, as compared to men in other East and Southern African countries, Ugandan males in 1995 were less likely to have ever had sex at a young age, more likely to keep sex within marriage, and less likely to have multiple partners, particularly if never married.

6. *HIV/AIDS-related services were implemented early on and extended throughout most of the country*

Africa's first confidential voluntary counseling and testing (VCT) services with counseling and support to those who tested negative as well as for HIV began in Uganda in 1990 through the NGO AIDS Information Center (AIC). Condom marketing faced some initial resistance, but gained acceptance from the mid-1990s. Sexually transmitted infections (STI) diagnosis and treatment have received increased support.

Three realities about HIV/AIDS prevention in Africa

A clear outcome from the experiences of both Senegal and Uganda is that HIV prevention programmes function best in an environment that confronts uncomfortable cultural and societal truths while taking a pragmatic approach and promoting an open and honest discussion of sexuality, gender roles and basic human rights. During the Commission's consultation on prevention, participants highlighted the following three uncomfortable truths as particularly central to increasing the efficacy of prevention programmes.

- “ABC” must be part of a comprehensive approach.
- Male attitudes towards women and about sex need to be confronted.
- Women's control over sex and reproduction needs to be strengthened.

ABC must be part of a comprehensive approach

“There is nothing inherently wrong with the ABC message. Yet it does not go far enough. Specifically, the ABC approach makes no distinction between the different needs of men and women, and it fails to offer African girls real options attuned to the reality of their daily lives” (UNAIDS 2004, p.12).

Echoing the findings of the Secretary-General's Task Force on Women, Girls and HIV/AIDS in Southern Africa (box 3.1), CHGA's participants found little wrong with the so-called ABC strategy, which recommends abstinence from sex, being faithful to one's partner or using a condom (CHGA 2004c). These were traditional measures for preventing sexually transmitted infections, including HIV.

Less well understood, however, was how to bring about ABC in the context of the epidemic. In the words of one national AIDS coordinator, “Often the way the ABC approach is applied has served to confuse the outcomes of successful HIV programmes with the message needed to achieve effective results on the ground.” It fails to identify the various components' effectiveness and relevance in the cultural, political and economic circumstances in which they are applied. Despite the proven efficacy of condoms in preventing sexually transmitted infections, promoting condoms remains controversial in many African countries and with some donors. The result has been an imbalance in HIV prevention strategies that focus on abstinence with limited evidence of efficacy on the ground.

Box 3.1

Does ABC go far enough?

The report of the Secretary-General's Task Force on Women, Girls and HIV/AIDS in Southern Africa offered several conclusions on the ABC message:

Abstinence is unrealistic in an environment where boys are encouraged to be sexually aggressive and girls are kept ignorant about their own sexuality. Calls for abstinence are, of course, meaningless when sexual activity is coerced and when women and girls feel they must resort to sex to survive.

Being faithful works only if both partners play by the same rules. Yet prevailing norms encourage men to have multiple partners. As one male adolescent in Namibia put it, "You can get famous if you have a lot of girls." Fidelity will do nothing to protect a girl or woman against HIV/AIDS if her partner is unfaithful or already infected.

Condom use is almost invariably a male decision, and many men remain deeply reluctant to use condoms. Alternative forms of contraception that might give greater power to women and girls are hard to come by. Microbicides are still a distant though foreseeable promise. Female condoms are neither widely available nor easily affordable, and although women control them, their use often calls for negotiating with a partner and being familiar with one's body.

Source: UNAIDS 2004.

Participants accepted abstinence as part of a multisectoral approach but cautioned against overrelying on it to the detriment of being faithful or using condoms. At the heart of the debate was the critical issue of behaviour change. An explicit logic of the ABC approach is that individuals change sexual partners at high rates and that changing partners and engaging in protected or unprotected sex is an individual choice. Individuals can choose differently, if they have the right information. But experience shows that orchestrating behaviour change is not that simple. Getting people to change their sex lives requires addressing their realities.

The best way to do this is to encourage those who fund, design and implement prevention programmes to understand these diverse situations and to tailor custom messages to specific local geographic and social needs. Pushing for one overarching best message will never be effective (Epstein 2005). Uganda achieved remarkable diversity in prevention messages by establishing a political environment that encouraged many actors with many messages (Stoneburner and Low-Beer 2004). Uniform prescriptions from outside may end up wasting resources and lives (Halperin, Steiner and others 2004; Green 2003).

The strength of the multisectoral approach is encouraging multiple actors to become involved in HIV prevention in diverse ways. The Ugandan AIDS Council,



*As a woman,
if you stay
monogamous,
AIDS still
meets you in
the bedroom.”*

*Participant, CHGA
Interactive: African
Development
Forum, Ethiopia.*



for example, had a role in this process, but it may not have been the role that those wanting to use this approach in other contexts envisage. In Uganda many religious groups, non-governmental organizations and academics were represented on the council, which provided a national forum for groups to take part in HIV prevention planning. This appears to have legitimized the wide variety of approaches taken, by promoting the involvement of organizations that approach HIV and AIDS in different ways (Parkhurst 2001). This is very different from the assumed roles of national coordinating bodies, where their mere physical presence is to signal their political commitment.

Clear and positive lessons can come from multisectoral approaches and national coordinating bodies, but they are not a panacea and they do not work in all contexts. Calls for national committees to manage HIV funding and prevention messages reflect a history of country difficulties in managing multiple finance streams. National authorities can thus do much to centralize and simplify finance flows. National coordinating bodies can include multiple nonstate actors, but based on Uganda’s experience they must provide a forum for the full range of actors to interact with government. There may be limits to what they can achieve, however, and ministries of health must not be overshadowed by national coordinating bodies simply for the sake of having them or inflicting a uniform process across all countries.

Male attitudes towards women and about sex need to be confronted

Usually an intensely private and secret activity, sex appears to be a matter of personal choice. But it is also a social activity. The choices of whom to have sex with, who is sexually attractive, what kind of sex to have and how, are often influenced by friends, relatives, peer groups, status reference groups, religious affiliations, financial circumstances, national and local security and self-image. Sex is not simple, and influencing sexual behaviour is not simple either. Sex is also about how people see themselves as human beings—particularly how men see themselves and what they think it is to be a man. A participant from the consultation on gender and AIDS put it this way: “In our societies, men have a ‘cultural licence’ to demand sex, unprotected, at any time, and the woman cannot say no, even if she knows he’s infected. This has to change.” (CHGA 2004c).

Box 3.2

Legislative reform to promote gender equality in Botswana

Botswana has policies and programmes to ensure gender equality, empower women and promote their full and equal participation in national economies. It established a full department to coordinate the implementation of government policy on gender. The Deeds Registry Amendment Act of 1996 allows married women to register immovable property in their names, and more recently parliament abolished the Marital Power Act of 2004. Discriminatory clauses have been removed from the Citizenship Act of 1995, and Botswana women married to non-citizens can now pass on their Botswana citizenship to their children. Other legal changes to protect women include the Penal Code Amendment Act of 1998, which includes a gender-neutral definition of rape.

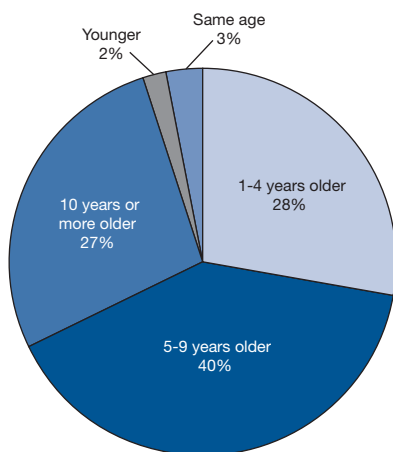
Source: Daily News 2005.

A major step to destigmatize HIV/AIDS and enhance prevention efforts is to discuss sex and sexual relations (see chapter 1). Sex, along with wealth, income and status, is one of the great drivers of people's actions, often shaping men's perceptions of their social positions in relation to other men and to women.

Driven by poverty and the desire for a better life, many women and girls succumb to the "sugar daddy" syndrome, exchanging sex for money, goods and other basic services. Data suggest that young women have much older sexual partners, increasing their exposure to HIV (figure 3.2).

Figure 3.2.

Two-thirds of young women's most recent sexual partners were five years or more older

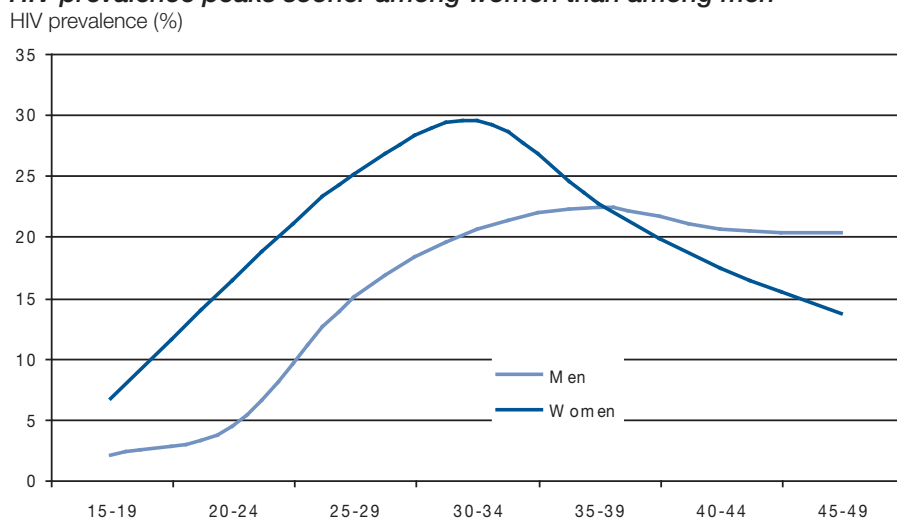


Source: Gregson and others 2002.

At the regional CHGA Interactive meeting in Botswana, one participant referred to this syndrome as “food for work.” In reality, however, intergenerational sex is a key driver of the pandemic, exposing young women to an elevated risk of infection. Men generally become infected later in life than women, usually in their mid-twenties or later, so the older the man, the more likely he is infected by HIV. By contrast, many young girls are infected almost as soon as they become sexually active (figure 3.3).

Leadership is required to protect young women from sexual exploitation and to enforce the legal protection of women’s land and property rights (box 3.3). In particular, men must recognize that forced sex is a form of rape and is always wrong. In a study in KwaZulu Natal, South Africa, for instance, more than a third of girls ages 15–19 reported losing their virginity as a result of force, coercion or trickery (Manzini 2001). A CHGA study in Uganda revealed that one teenage girl in eight had experienced forced intercourse in the previous year (CHGA 2005b). In the words of Esther Andale of Association de Lutte Contre les Violences Faites aux Femmes, a CHGA Interactive participant, “Sexual violence fuels HIV/AIDS and is aggravated by the discrimination and subordination of women which permeates our societies. It is inextricably linked to the HIV/AIDS pandemic in our societies, and must be addressed if we are to adequately address HIV/AIDS” (CHGA 2004c).

Figure 3.3
HIV prevalence peaks sooner among women than among men



Source: Zambia Demographic and Health Survey, 2001–02.

Hard to confront, these issues challenge some established interests and norms—for example, the common belief among some men that they can have sex when and how they want without negotiating with their partner, especially their wife. Some women believe and hold on to these values, too, and impress them on their daughters and grand-daughters. Addressing these issues requires political and community leaders to recognize that men's attitudes towards sex often put women and men at risk of acquiring HIV. Persuading men to act responsibly must be at the top of any prevention agenda.

Faith-based organizations active in HIV/AIDS programmes in many communities have their own approaches to prevention, care and support. They also take different stands on issues such as condom use and abstinence. An important element of any national prevention campaign is to encourage faith-based organizations to engage their communities in discussions about sexuality and to promote tolerance towards different prevention messages and strategies. Such an approach can help eliminate conflicting and exclusionary messages while enabling multiple messages to reach individuals in targeted ways.

Women's control over sex and reproduction needs to be strengthened

Cultural, social and economic factors limit women's ability to negotiate safe sex, making them much more vulnerable to HIV and sexually transmitted infections. Social and cultural norms define sexuality differently within and outside marriage for men and women. Because men have the most control over sex and sexual relations, they tend to determine how sex and sexual relations are defined, leaving women (especially married women) little say on sex and reproduction and less able to protect themselves against HIV infection. While most respondents agree that, if the man has a sexually-transmitted infection, the woman should be able to refuse or ask for a condom, a substantial minority still denies the woman that right (figure 3.4). This of course depends upon the man's readiness to admit that he has an STI—which most do not.

Social pressures and cultural norms also influence women's access to information about HIV and AIDS, sexuality and reproductive health. These norms include an emphasis on women's ignorance about sexual matters and girls' virginity. Rural women from South Africa reported not liking condoms because they feared that if the condom fell off inside the vagina it could get lost and perhaps travel to the throat or another part of the body (Commonwealth Secretariat 2002). A lack of knowledge about their bodies and sexuality prevents women from protect-

ing themselves and identifying and obtaining treatment for sexually transmitted infections.

The lack of female-controlled protection against AIDS is a serious impediment to women's ownership of their sexuality and reproductive health. While female condoms are sometimes available, women cannot use them without the man's consent. A credible alternative, vaginal microbicides, can be used without the consent or knowledge of the woman's partner, but their efficacy is unclear (box 3.3). Male condoms remain the primary means of preventing HIV transmission during sexual intercourse, giving men decision power over protection and reproduction. Childbearing is incompatible with the use of condoms, putting women at high risk for unsafe sex with their male partners in the effort to reproduce even when informed about HIV and AIDS risks.



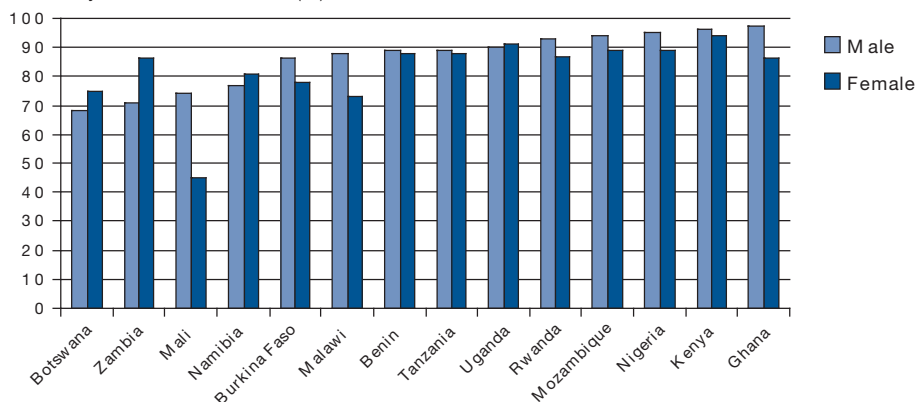
I believe that if you empower women with scientific options, it would have more effect than preaching more sensitization and awareness. We are sensitized and aware, but powerless to protect ourselves.”
Participant, CHGA Interactive: Cameroon (CHGA 2004a).



Figure 3.4:

Many hold that a wife cannot refuse sex or ask for a condom even if her husband has a sexually transmitted infection

Share of respondents who agree that a wife can refuse sex or ask for a condom if her husband has a sexually transmitted infection (%)



Source: Botswana, Botswana AIDS Impact Survey 2001; Tanzania, HIV/AIDS Indicator Survey, 2003–04; all others, Demographic and Health Surveys carried out over 2000–03.

HIV counselling and testing are usually treated as individual exercises, focused on the individual who comes forward. Experience shows, however, that family-based or couple-based approaches work better, emphasizing that testing HIV positive poses joint challenges, and reducing the risks of rejection or violence against a woman who tests positive. Couples can test and be counselled separately or together and then plan their future together, including how to handle the social and psychological challenges, how to handle their sexual and reproductive lives (including, if the couple is discordant, how to minimize the risks of the HIV

negative partner becoming infected), and how to approach issues of treatment and care.

Poor use of health services is another obstacle. In African societies (as elsewhere in the world) HIV-positive women generally face stigmatization and blame. The fear of stigma prevents them from undergoing HIV testing and treatment. And post-exposure prophylaxis is not readily available for women and girls who are victims of rape and other sexual abuse.

Both men and women need to expand the dialogue on sexual health and economic and social positions. The dialogue need not begin around sexual relations, but it cannot ignore them. A dialogue can begin by discussing ways for both women and men to get more information about HIV/AIDS and how to use that information for prevention.

Prevention programmes must be better targeted

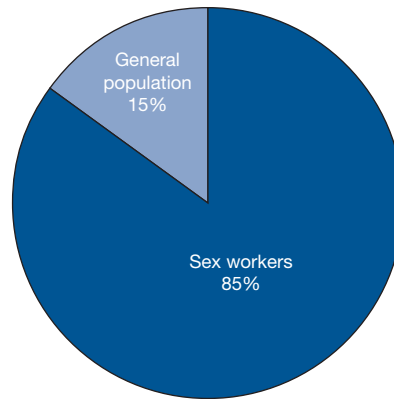
The diversity of Africa's epidemics requires a framework that seeks to better understand vulnerable groups. UNAIDS uses a four-fold classification of epidemics—low level, concentrated, generalized and hyper-endemic, and advises “know your epidemic” (UNAIDS 2007). Each kind of epidemic is present in Africa. Northern African countries have mostly low-level epidemics, in which no population category is at high risk. Some countries are at risk of concentrated epidemics among commercial sex workers and injecting drug users. The majority of sub-Saharan countries have generalized epidemics in which heterosexual men and women in the general population are at significant risk. The southern African countries are “hyperendemic” because of the extremely high prevalence levels.

It is very important to note that in a generalized epidemic or a situation of hyper-endemicity, there are specific groups at especially heightened risk. HIV prevalence among commercial sex workers, labour migrants and certain occupational categories and risk groups (e.g. truck drivers and prisoners) tends to be much higher than among the general population. Therefore, even when the entire adult population is at risk, specific subgroups face much elevated risks and warrant special attention. It is also important to recognize that in a country with a pre-existing generalized epidemic, activities such as the rapid growth of injecting drug use face a massively increased risk of spreading HIV among drug users.

Within a generalized epidemic there are also concentrated epidemics. But these concentrated epidemics are not always recognized and made central to policy response in African countries; although Senegal is an exception.

Figure 3.5

Most HIV infections in Ghana are acquired from sex workers



The implication of this is that prevention programmes should be targeted, and that in situations where the majority of infections occur within a concentrated epidemic, it is much more resource efficient to focus on vulnerable groups at risk rather than on the general population. There are several reasons why prevention programmes have not followed this approach. One is that the highest-risk groups, such as men who have sex with men, sex workers and injecting drug users, are stigmatized.

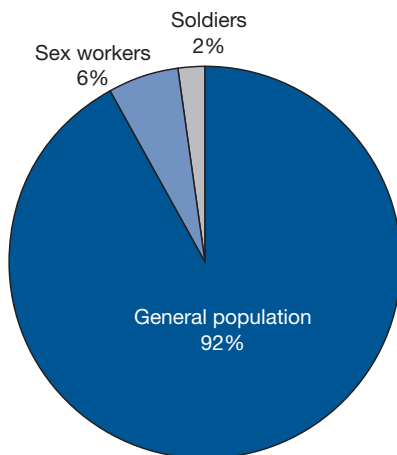
Another reason is reliance on behavioural survey data, which may indicate a lack of protected sexual contact among the population at large. This evidence is taken to imply a need to promote prevention among the general population. Detailed episurveillance data would have indicated that the probability of exposure to HIV for the general populations is low. This implies that countries need good surveillance data and better monitoring of interactions among groups (such as sex workers and clients, injecting drug users and their partners). Because such data gathering and monitoring are not usually done, prevention resources are not necessarily spent where they will do the most good.

Southern Africa faces hyperendemic HIV in which the pattern is different. In Zambia the general population accounts for 92% of infections, sex workers 6%, soldiers 2% (figure 3.6). The pattern is presumably the same in Lesotho, Swaziland, Zimbabwe and Botswana. This suggests that general prevention (targeted at the entire adult population) matters more for southern Africa, but focused prevention (targeted at the highest-risk groups, with a particular emphasis on those already living with HIV) is needed more in west Africa. For eastern and central Africa, more information is needed and most probably a mix of approaches will yield the best outcomes.

Prevention programmes have limited coverage everywhere. In southern Africa there is a notable urban bias with much less prevention activity conducted in rural areas. With hyperendemic HIV, people in rural areas face significant risks of becoming infected and need to be reached by HIV prevention programmes.

Based on this argument, two parallel and interconnected approaches will improve the efficacy of prevention programmes. The first is to better target prevention interventions to specific groups in ways that take into account their risk factors. The second is to expand prevention services to reach groups in underserved areas. Most of the at-risk population groups still have limited access to prevention and treatment services (see box 3.1). Many people at high risk of infection lack support to protect themselves and to change their sexual behaviour.

Figure 3.6
Source of HIV infection in Zambia



Source: CHGA 2005d.

Targeting men and boys

In several African cultures men occupy dominant positions at home and at work. As boys grow up, they are socialized to project themselves as the dominant sex and perceive girls and women as subservient. These pervasive male attitudes can translate into relations with multiple sexual partners and various forms of gender and sexual violence.

To promote male sexual and reproductive health and positive behaviour towards partners or wives, men should be encouraged to speak out about and engage in changing gender norms and disparities that make women and girls more vulnerable. This can be done through male leaders, men's groups in churches and other faith-based organizations, boys' groups in schools and workplace programmes.

Positive male behaviour, including the obligation to reduce risks of HIV transmission, should be reinforced in many of the same ways and through media portrayals of responsible male behaviours.

Targeted HIV prevention programmes for men and boys should be organized in schools, workplaces (including the armed forces), prisons, communities and soccer stadiums and other recreational areas. Popular music can be an effective medium for communicating this message.

Targeting women and girls

Women in sub-Saharan Africa account for 58% of all HIV infections in the region, but a striking 78% of those young people (ages 15–24) living with HIV are female. Access to services to prevent mother-to-child transmission of HIV among pregnant women is only slowly increasing, reaching just 11% in 2005 (International Community of Women Living with HIV/AIDS 2007). Only two-thirds of HIV-positive women accepted antiretroviral treatment—an indication of how stigma reduces uptake. Targeting girls and improving their opportunities for education correlate closely with reductions in their risk of infection.

To create a supportive environment for gender equity and protection of women’s and girls’ rights, relevant legislation and policies must be enacted and enforced. Women and girls can be mobilized and supported to lead HIV prevention in their communities and families by female leaders (first ladies, politicians, business executives, celebrities, religious leaders, pressure groups, associations of queen-mothers), established gender equity groups and activists, women’s groups in churches and other faith-based organizations, women’s workplace associations, associations of women living with HIV and AIDS and girls’ groups and associations in schools.

Gender disparities and norms that make women and girls more vulnerable—including “having multiple sexual partners is part of manhood, even in marriage,” “the place of a young girl is at home,” “sexual violence against women is tolerable” —and the like should be challenged by male leaders’ statements and behaviours as role models (heads of state, politicians, business and religious leaders, musicians, sports figures), men’s groups in churches and other faith-based organizations and boys’ groups in schools.

Women and girls can be empowered by:

- Educating young girls in a safe environment and implementing policies that will eliminate gender disparities in primary and secondary schools.
- Promoting the use of female-controlled HIV prevention options.
- Protecting women’s property rights.

- Expanding initiatives to improve access to financial resources, micro-credit and skills training for income generation.
- Advocating for more resources for research and development of microbicides and vaccines.

And to improve access to female-friendly health services, staff training must be sensitive to women's needs and facilities' hours of operation must be convenient for working women.

Targeting vulnerable groups

Surprisingly, prevention programme coverage of high-risk behaviour groups (injecting drug users, sex workers and their clients, and men who have sex with men) is low, mostly thanks to political and ideological considerations. These groups are marginalized, highly stigmatized and difficult to reach with services. Governments are often reluctant to admit that they exist and may find providing services to them politically unacceptable. In some cases these groups have been harassed, abused and even criminalized. One of the most important but contentious interventions is working with sex workers. Once their confidence is gained—as Senegal and Thailand's experiences show—the results are significant.

Ways to target these vulnerable groups include:

- Protection of human rights
- Building their capacity to take the lead in prevention programmes.
- Promoting safer sexual behaviour among these groups and their partners or clients.
- Providing sexually transmitted infection prevention and care services.
- Implementing policies and legal frameworks that do not criminalize and discriminate against the target groups.
- Providing a range of social services for low income women

Targeting young people

More than 40% of people living with HIV and AIDS in Africa are between the ages of 15 and 24. In principle, HIV and AIDS education is provided to 58% of secondary school students in Sub-Saharan Africa. But surveys show that student knowledge and behaviour change are low. For example, household surveys indicate that few young people can name basic prevention methods. The critical phase for avoiding high-risk sexual behaviour, adolescence is the time to develop attitudes and behaviour.

At one time many African societies had initiation rituals and societies for young men and women that exercised moral control over people's lives, often in a framework of age grading and respect for elders. Today these traditions are less influential. Reverting to the past is impossible, but the lesson from the past is that people want and need the support of the wider society and community to adopt and sustain behaviours. That support involves not only discussing sexual relations and expected behaviour but also providing a sense of purpose and hope for economic and social well-being and stability. Children and young people are vulnerable to sexual advances within the household and when they begin work, which can be very early indeed. They need support from family, community and government to prevent or seek redress for abuse.

In a report from UNICEF and the Lesotho Ministry of Gender and Youth, Sports and Recreation, a 16-year-old child worker is quoted as saying about her relationship with her employer: "He said I should kiss him; I refused. He said I should sit near him; I refused. He had promised me money for food and clothes on condition that I returned sexual favours to him" (IRIN News 2005). Other studies by the International Labour Organization found a direct link among a higher HIV risk, having to work and orphanhood. Girls and boys must be protected from such situations by law and by custom by:

- Promoting universal basic education, including early childhood care and education.
- Ensuring free and compulsory primary education.
- Promoting policies and practices that favour access, gender equity, school attendance and effective learning—including ensuring environments free of violence, bullying and sexual abuse by teachers and fellow students—with, for example, clear codes of conduct and practice backed by concrete enforcement measures.
- Empowering schools to implement good quality school health programmes that include HIV prevention.
- Integrating education on HIV prevention into school curricula.
- Ensuring that teachers are well prepared by investing in pre-service and in-service training.
- Encouraging teachers to be role models.
- Making available scientifically accurate teaching and learning materials.
- Promoting life skills and peer education.
- Organizing out-of-school sports and recreational activities that promote HIV prevention.
- Ensuring that children and young people who are not in school have access to HIV/AIDS education.
- Conducting outreach education programmes that are likely to be appealing and acceptable to young people.

- Institutionalizing HIV prevention education into apprenticeship trainings.
- Targeting informal sector young women's groups.
- Encouraging parents and communities to take responsibility for their children's education on HIV prevention.
- Ensuring that parents are well prepared to discuss HIV prevention with their children.
- Organizing HIV prevention programmes that will bring together families.
- Ensuring access to youth-friendly reproductive and sexual health services.
- Training health workers to eschew judgemental attitudes.
- Placing reproductive health facilities in youth centres and near recreational facilities and ensuring effective referral through schools.

Targeting children born to HIV-positive mothers

Some 500,000 children a year are HIV-positive in Africa—almost all through vertical or mother-to-child transmission. Nearly all these infections could be avoided with the appropriate interventions, which in Africa are available only to a limited degree. Only an estimated 8% of pregnant, HIV-positive women have access to such services.

Preventing mother-to-child transmission rests on four pillars, agreed in the 2004 Glion Call to Action on Family Planning and the Prevention of HIV/AIDS in Women and Children, starting with preventing HIV infection in women, as well as preventing unintended pregnancy in HIV-positive women, which in turn will limit the number of infected infants. The next level is to prevent an already infected mother from transmitting the virus to her child. Fourth, interventions to prevent mother-to-child transmission should include attending to and caring for the mother and any children born HIV positive including referrals for antiretroviral treatment. PMTCT services should include the family (not just the mother and child), developing community links and improving health facility infrastructures (CHGA 2004d, WHO and UNICEF 2007). Efforts to reduce the number of infants infected by HIV continue to suffer due to women's limited access to primary HIV prevention and health services. Promoting women's access to antiretroviral therapy for their own health—and providing food, nutritional services and other basic benefits—can increase their participation in services to prevent mother-to-child transmission and improve medical outcomes for both mothers and their newborns (CHGA 2004e).

Global guidance developed by the UNAIDS Interagency Task Team on PMTCT (WHO and UNICEF 2007) stresses that prevention of HIV transmission from mother to child must be scaled up rapidly, including interventions to keep the mother alive and postpone orphanhood. The availability, quality and use of mater-

nal and child health services must be improved, and quality voluntary counselling and testing must be provided so that pregnant women who need services to prevent mother-to-child transmission can seek and accept them, and to support partners and the wider household for women found to be HIV-positive. In generalized epidemic settings HIV testing and counselling should be provider-initiated and in all settings, conforming to “the 3Cs”, confidentiality, informed consent and provision of condoms to prevent infection or onward transmission. Health workers should be trained to provide advice for mothers on appropriate breastfeeding, nutrition and other behaviours that sustain health and minimize risk of transmission and provide formula and assist in other ways (nutrition) as deemed necessary.

HIV positive pregnant women need medical interventions including antiretroviral therapy to minimize risk of HIV transmission around the time of birth as well as continued access to treatment. Effective medication should be administered to prevent infection of the child, and children who are infected should receive anti-retroviral therapy. Anti-retroviral therapy should be available for mothers and children who need them.

Special importance of children in the context of AIDS

Children are the neglected victims of HIV and AIDS. Across Africa there are an estimated 13 million children orphaned by AIDS. These figures are only an index of the burdens and stresses that HIV and AIDS are placing upon children and families (Monasch and Boerma 2004). The numbers of children who are affected is much greater, including children who are caring for sick and dying parents, children who are in families which are fostering orphans, and children who have lost close relatives and friends to the disease (Joint Learning Initiative on Children and AIDS 2007). In southern Africa, it is fair to say that all children are living in the context of HIV and AIDS. Measures to provide social protection, psycho-social support and education to children are an essential measure if the next generation of Africans is to overcome HIV and AIDS (Edstrom 2007).

Children who have lost one or both parents to AIDS have, in general, fewer educational opportunities and greater difficulty gaining access to prevention services than other children (Tadria 2004). Recent data indicate that school attendance ratios for double-orphaned children compared to non-orphans varies between 0.65 (Nigeria) to 1.05 (Burkina Faso) with a median of about 0.93 (Webb 2007). But these differences in access are not a good rationale for specifically targeting orphans. The impacts are fine-grained. Recent research indicates that the girl

child who has lost her mother, or whose mother is absent, is in the most vulnerable situation. She is more likely to be sent away to care for a sick relative, to be withdrawn from school, to be engaged in paid work, or to have experienced mistreatment or abuse. There is also evidence that girls who have lost their mothers are subsequently most vulnerable to HIV infection.

Extended and foster families and communities provide an extensive range of services to orphaned children, but as the number of affected children rapidly increases, these informal systems are stressed. A decade ago, fewer than 3% of orphaned children in Africa received formal support services (Policy Project 1998). By 2007, these numbers had increased, to range from 10% (Kenya, Togo) to more than 90% (Botswana) (Webb 2007). There are now major initiatives to increase social protection efforts targeted at children affected by HIV and AIDS, and poor and vulnerable children generally (Joint Learning Initiative on Children and AIDS 2007). Of particular importance is meeting the psychosocial needs of these children (Richter, Foster and Sherr, 2006; Gillespie 2006).

In 2001 the General Assembly adopted a declaration of commitment on HIV/AIDS in which heads of state and government committed themselves by 2003 to:

- Developing national policies and strategies for strengthening government, family and community capacities.
- Providing orphans appropriate counselling and psychosocial support.
- Ensuring orphans' enrolment in school and access to shelter, good nutrition, health and social services on an equal basis with other children.
- Protecting orphans and vulnerable children from all forms of abuse, violence, exploitation, discrimination, trafficking and loss of inheritance (UNGASS 2001).

As late as 2003 few African countries had national policies on orphans and vulnerable children, and no national programmes existed in many of the hardest hit countries. Thereafter, UNICEF spearheaded efforts to encourage every government to draw up a National Plan of Action for orphans and vulnerable children (OVCs). These were envisaged as mechanisms to facilitate the implementation of governments' commitment to protecting OVCs. Not doing so has direct implications for the sustainability of stable sociocultural, political and economic systems. In 2008, the InterAgency Task Team on OVCs will assess the success of these National Plans of Action.

This focus on orphans is now anachronistic. As attempts to address these challenges were scaled up, it became apparent that singling out orphans was inappropriate. The vast majority of young children affected by HIV and AIDS still have a living parent, and the majority of orphans are under adult supervision and care,

though the quality of that care is compromised. The experience of UNICEF and other children's agencies in responding to the needs of children affected by AIDS has led to the emergence of new best practice. These shift the attention from the individual child orphaned by AIDS to the family and social environment and to the needs of all children living in the shadow of HIV and AIDS. According to recent analysis, orphan targeting is an anachronism and targeting according to other indicators of poverty and vulnerability is the road ahead (Edstrom 2007; Webb 2007).

Good examples of strengthening community support to orphans as a means of ensuring integration of children affected by HIV and AIDS in the mainstream society have been identified in Kenya, South Africa (KwaZulu Natal) and Uganda among others (Foster 2005). They suggest a focus on enhancing communities' capacity to supervise and monitor the well-being of children affected by HIV and AIDS. National nongovernmental organizations working at the community level receive support to provide community-based training on child socialization and to monitor the well-being and social integration of orphans in the community and their foster homes.

To strengthen law enforcement structures to monitor and protect children from violence and abuse, African governments should be required to establish child-friendly law enforcement structures at the community level. They would provide security to all vulnerable children and work with community-based organizations and volunteers to monitor their well-being.

On those occasions in which children affected by AIDS, especially orphans, require institutional care, governments need to develop good practice guidelines and a vetting or monitoring system to ensure that existing institutions provide positive environments for the orphans. In addition, governments should be encouraged to make budgetary allocations to support the institutions that care for orphans. Specifically, a resettlement and reintegration fund should be established to provide microcredit for orphans who reach adulthood and have to move from institutional care into society.

Although guidelines, and access to voluntary counselling and testing as well as treatment for adults have improved in many countries, access to medical and nutritional care is still a major problem for HIV-positive children. Institutions caring for these children should be supported upfront to provide adequate and appropriate medical care. But most important, governments should, as a matter of priority, establish counselling and testing centres for children infected and affected by HIV and AIDS. These centres should have the capacity to provide psychosocial counselling for orphans in order to help them deal with the trauma of losing parents.

African leaders should pay close attention to the rapid evolution of analysis and recommendations in the field of children and HIV and AIDS. The preferred label has moved from ‘orphan’ to ‘orphans and vulnerable children’ to ‘children in the context of HIV and AIDS.’ Meanwhile the preferred responses have moved from targeting orphans with individual interventions, to attending to the wider context of vulnerability and developing and implementing universal social protection measures, including welfare provision and psycho-social interventions (Joint Learning Initiative on Children and AIDS 2007).

Core elements of national HIV prevention strategies

Developing a supportive environment for targeted HIV prevention requires national and communitywide discussion of sex and sexuality, risk, risk settings, risk behaviours and cultural practices that may increase the likelihood of transmission. A supportive environment also deals with stigma, fear and discrimination, as well as with policy and law at the national and community levels. The key to creating a supportive environment must be appropriate and effective national prevention programmes and strategies. Elements for such a strategy are discussed in greater detail in UNAIDS (2005 and 2007), whose recommendations CHGA strongly endorses. The UNAIDS report identifies several overarching principles in which programmes should be grounded. HIV prevention programmes should:

- Be differentiated and locally adapted.
- Be evidence-informed.
- Require a long-term and sustained effort.
- Have adequate coverage, scale and intensity.
- Include community participation.

While endorsing these overarching principles, CHGA participants called for emphasis on other core elements.

Increasing knowledge. Prevention programmes should ensure that people receive the basic facts about HIV/AIDS in a language and medium that they can understand and relate to, including intensified mass media campaigns that use radio, television and print media and involve government institutions, civil society groups and the private sector (box 3.3). Experience clearly shows that information alone is not enough: Campaigns must also provide emotional and social motivation for change (FHI and SCOPE OVC 2002). This requires going beyond imparting basic facts to promoting discussion of sexuality, gender and relationships. Silence on these matters has proved a powerful impediment to changing established norms. Although the mass media can have a role here too,

community campaigns are often more effective in turning awareness into action (Stoneburner and Low-Beer, 2004).

Box 3.3

Preventing HIV through the mass media in Zambia

The Zambia Social Marketing Project, run jointly by Population Services International and the Pharmaceutical Society in Zambia, organized the HEART media campaign in 2000, which targeted teenagers to provide a social context in which prevailing social norms are discussed, questioned and reassessed. By creating an atmosphere conducive to changes in social norms and individual sexual behaviour, the campaign contributed to the nationwide effort to enhance the likelihood that young people would reduce their risk of HIV infection through abstinence or consistent condom use, thereby reducing the incidence of HIV/AIDS and other sexually transmitted infections.

A post-campaign survey found that many young people exposed to HEART messages changed their behaviours: condom use at last sex was 1.6 times higher among people who saw the messages, and they were 1.7 times more likely to report remaining abstinent.

Source: Underwood and others 2001.

What kind of campaigns should be promoted? Participants were keen to endorse the approach adopted by the Working Group on HIV/AIDS of the UN Millennium Project's Task Force on HIV/AIDS, Malaria, TB and Access to Essential Medicines. The working group's report argues that media campaigns should be predicated "on the mode of transmission that prevails in the target population, as well as on cultural and sometimes political considerations" (UN Millennium Project 2005, p. 32). Where transmission is primarily sexual, prevention campaigns can focus on making sex safer by promoting the use of condoms, on reducing the number of sexual contacts and delaying sexual debut or on both. But these messages will have little effect if behaviour change is greatly constrained. In particular, if women are unable to require the use of condoms or to refuse sex, the key to effective prevention may not be increasing knowledge or motivation—it may be strengthening women's capacity to protect themselves.

Stimulating community dialogue. Participants in the CHGA Interactive session argued that only communities themselves can change sexual and gender norms, so national prevention efforts by donors and national governments should focus mainly on stimulating and supporting broad, indigenously developed response. Prevention programmes should encourage community and national discussion on the basic facts of HIV and AIDS and the underlying factors that contribute to the epidemic, such as risky behaviours and risk settings, environments and cultural practices related to sex and sexuality, and marginalized practices (such as drug use) that create these conditions. They should promote community solidarity and support for people regardless of their HIV status, to lessen fear and

denial. They can also stimulate discussion of health care-seeking behaviours for prevention, care and support (box 3.5).

Box 3.4

Increasing knowledge through community dialogue in Ethiopia

In Ethiopia a partnership between the United Nations Development Programme, the government, local nongovernmental organizations and communities has led to a series of “community dialogues.” Aided by local skilled facilitators, community members talk about taboo subjects, often for the first time. While exploring the implications of HIV/AIDS, they are identifying their own cultural norms and values that are fuelling the epidemic and the social capital within the community to overcome them.

Some of the results since the first dialogue in 2003:

- Communities are taking responsibility for their own prevention, by travelling great distances to use voluntary counselling and testing centres and forbidding the use of shared needles and blades.
- Communities are discontinuing traditional practices that they have identified as harmful in the context of HIV/AIDS, such as female genital mutilation, widow inheritance and wife sharing.
- Community voices are feeding into local governance.
- Communities are drawing upon their own social capital to provide care and support for children orphaned as a result of AIDS.
- Communities are sharing their conversations and wisdoms with neighbouring communities.

Source: UNDP Ethiopia 2004.

Community involvement that includes special populations is just as important to combating the epidemic when it is concentrated among, for example, injecting drug users, sex workers and their clients, and men who have sex with men. Here involving the vulnerable populations themselves, including through peer outreach, is critical to winning their trust and drawing on their knowledge of their circumstances and the approaches most likely to be effective. It is important, however, to be aware of limits to the power of these fragile and marginalized “communities,” acting alone, to change their circumstances in order to protect themselves (Campbell 2003).

Changing attitudes. Prevention programmes should change attitudes on, for example, perceived personal risk of HIV infection, the right to and responsibility for safe practices and health-supporting services, compassionate and non-judge-

mental provision of services, open-mindedness concerning gender roles and the basic rights of those vulnerable to and affected by HIV and AIDS (box 3.5).

Box 3.5

Changing attitudes among youth in Ghana

Members of the Youngsters Peer Education Project (YPEP), a nongovernmental organization working with the United Nations Children's Fund to educate young people about HIV/AIDS, interviewed many young fishers in the Chorkor area of Accra and found that most perceived HIV not as a threat to them but as an inland disease. YPEP's Change for Good Programme aims to change behaviour by informing people about HIV/AIDS, a task especially important in communities like Chorkor where most people cannot read and many engage in high-risk practices such as having multiple sexual partners.

Changing attitudes and behaviours like those of the young Chorkor fishers takes time and hard work. Since so many people in Chorkor are illiterate, spreading awareness about HIV/AIDS is best done person to person. One of the keys to the success of the peer educators is that they come from the local community and know its problems. Gradually perceptions about HIV/AIDS and other sexually transmitted diseases are changing in Chorkor. When people in the community see others acting recklessly, they now say, "Don't do that. Be careful. AIDS is here..."

Source: UNICEF 2005.

Reducing stigma and discrimination. Communication about HIV prevention and AIDS mitigation should address stigma and discrimination and attempt to influence social responses to them (box 3.6).

Involving people living with HIV. Since the beginning of the epidemic, prevention strategies have been more effective when they have meaningfully involved people living with HIV in their design, implementation and evaluation. The principle of the greater involvement of people living with HIV/AIDS in the AIDS effort was formally recognized at the 1994 Paris AIDS Summit, when 42 countries agreed that ensuring their full involvement at the national, regional and global levels would stimulate the creation of supportive political, legal and social environments. HIV prevention strategies have, however, often failed to address the distinct prevention needs of people diagnosed with HIV and to build capacity for their meaningful participation. Their involvement has often been relegated to little more than tokenism. An effective response requires a change.

Prevention for people living with HIV empowers them to avoid acquiring new sexually transmitted infections, delay disease progression and avoid infecting others. Prevention counselling strategies increase knowledge of HIV transmission and improve safer sex negotiation skills. Other HIV prevention strategies also include scaling up, focusing and improving services and commodity delivery; services for sero-discordant couples; protecting human rights; strengthening

community capacity for mobilization; and supporting advocacy, policy change and community awareness. These strategies do not stand alone—they work in combination.

Ensuring adequate and consistent access to commodities (e.g. male and female condoms; HIV test kits; gloves; STI drugs and treatment; ARV medicines) and clinical services including ACC, PMTCT, STI diagnosis and treatment, services to provide safe male circumcision should also be core parts of HIV prevention programmes where sexual transmission is prevalent and male circumcision is not widespread.

Box 3.6

Reducing stigma and discrimination in the health service in Nigeri

The nongovernmental organization EngenderHealth works with local hospitals and clinics in five states in Nigeria to facilitate onsite infection prevention education and training to reduce HIV- and AIDS-related stigma and discrimination among providers. The participatory training at the hospitals and clinics is conducted with staff at all levels—from cleaners to physicians.

The consistent and correct application of standard precautions—such as handwashing, careful handling of sharps (including needles and syringes), use of protective barriers such as gloves, gowns and masks to prevent direct contact with blood and other body fluids, and safe disposal of contaminated waste—is important for protecting both health workers and clients from becoming infected. Training on infection prevention practices is important not only to prevent transmission of HIV and other viruses, but also to create a climate of safety where providers feel that they can give proper care without stigmatizing clients based on their perceived HIV status. In this environment clients should feel that they can seek care without risking their health or enduring discrimination.

Before the training 60% of health care workers at Adeoyo Maternity Hospital believed that clients infected by HIV should not be cared for in the same area as other clients. By the end of the training, only 5% believed this, and all of the participants felt comfortable assisting or being assisted by a colleague infected by HIV, compared with 43% before the training. The training also opened discussion about HIV/AIDS and reduced providers' fears after they were given tools to protect themselves from infection and treat clients and co-workers with dignity and respect.

Source: EngenderHealth 2004

New technologies for prevention

“We will work to achieve these aims [for African development] by building on the valuable G8 global HIV/AIDS vaccine enterprise, increasing direct investment and taking forward work on market incentives, as a complement to basic research, through such mechanisms as public-private partnerships and advance purchase commitments

to encourage the development of vaccines, microbicides and drugs for AIDS, malaria, tuberculosis and other neglected diseases. We note continuing work to explore establishing an International Centre for Genetic Engineering & Biotechnology centre in Africa to help research into vaccines for the diseases that are afflicting the continent.” (G8 2005)

While expanding and improving existing prevention and treatment programmes are critical to slowing the spread of HIV and prolonging and improving the lives of people living with HIV, alone they will not be sufficient to end the epidemic. To do this, safe, effective and affordable new HIV technologies are needed. Important progress is being made in this critical area: investment, for example, has increased with research and development now being conducted across the world, and more than 30 vaccine candidates are being tested—most in small early-stage critical trails (Johnston and Flores 2001; IAVI 2004). While these efforts are encouraging, participants at CHGA Interactive sessions stressed that more needs to be done now, because delays cost millions of lives. Here, we will consider briefly the status of research into vaccines, microbicides, male circumcision and the use of antiretroviral drugs to block infection.

Male circumcision

Male circumcision, a surgical procedure carried out on young men and infant boys in many parts of the world, is now proven to reduce the risk of heterosexual HIV transmission in men. Numerous observational studies over the past 20 years have suggested that the geographical correlation between lower HIV prevalence and high levels of male circumcision in countries in Africa and elsewhere was, at least in part, a causal association. Now, compelling evidence from three African randomized controlled trials involving more than 10,000 men in Kisumu, Kenya (Bailey et al., 2007); Rakai District, Uganda (Gray et al., 2007); and Orange Farm, South Africa (Auvert et al., 2005) demonstrates the partially-protective effect of male circumcision in reducing female-to-male transmission of HIV by 60%—an important landmark in the history of HIV prevention. The Orange Farm study was so compelling that it had to be discontinued in 2004 after an interim analysis showed a high “protection effect” in men. For similar reasons, the United States National Institute of Allergy and Infectious Diseases stopped two trials of adult male circumcision. (Whiteside, 2008).

Globally, an estimated 665 million men (approximately 30%) are circumcised, two-thirds of whom are Muslim (London School of Hygiene and Tropical Medicine, WHO & UNAIDS, 2007). Common determinants of male circumcision are religion, ethnicity, perceived health and sexual benefits, and conformity to social norms. Neonatal male circumcision is common in Australia, Canada, Israel,

New Zealand and the United States of America, and in much of the Middle East, Central Asia and West Africa. Median age at circumcision in East and southern Africa, where it is less common, varies from boyhood to the late teens or twenties.

Male circumcision rates in sub-Saharan Africa vary greatly and tend to be highest in West Africa, where, for example, an estimated 95% of men in Ghana (Ghana Statistical Services, Noguchi Memorial Institute for Medical Research & ORC Macro, 2004) and 93% of men in Cameroon are circumcised (Institut National de la Statistique du Cameroun & ORC Macro, 2004). In East and southern Africa, by comparison, an estimated 25% of men in Botswana (Kebaabetswe P et al., 2003) and 35% in South Africa are circumcised (Shisana et al., 2005). It is around 15% in Namibia, Swaziland, Zambia and Zimbabwe, but varies from 15% in Burundi and Rwanda to over 70% in Ethiopia, Kenya and Tanzania (Global Male Circumcision Prevalence at Country Level, WHO 2007). Variation also exists between different ethnic groups within countries. In Kenya, for example, circumcision rates vary from 17% among Luo men to 100% among Somali men (Central Bureau of Statistics [Kenya], Ministry of Health [Kenya] & ORC Macro, 2004).

A high-level WHO/UNAIDS Technical Consultation issued a set of conclusions and recommendations on male circumcision in March 2007. These emphasized that the introduction or scaling-up of services offering male circumcision would have the strongest prevention effect in places where the burden of HIV is heaviest—such as hyper-endemic countries in sub-Saharan Africa, or areas within them, where HIV prevalence is high and where one third or less of men are typically circumcised. There is a fear of a disinhibition effect following circumcision—men adopting higher risk behaviours because they believe that circumcision represents a ‘magic bullet’ which gives them complete protection from HIV infection—but thus far only modest evidence for such risk compensation. Therefore, care must be taken to incorporate male circumcision provision into comprehensive HIV prevention programmes. Those programmes should include intensive counselling on safer sex, especially regarding the reduction of concurrent sexual partners and the correct and consistent use of male and female condoms (WHO/UNAIDS, 2007). Modelling studies project that full coverage of male circumcision could avert about 5.7 million new HIV infections and 3 million deaths over 20 years in sub-Saharan Africa (Williams et al., 2006). Cost-effectiveness studies in South Africa, Swaziland and Zambia suggest that male circumcision has potentially substantial cost benefits in terms of cost per infection averted in light of costs of lifelong antiretroviral treatment. (Lancet Infectious Diseases, 2007; Martin et al., 2007; Kahn et al., 2006)

Box 3.7

Recommendations of the Who/UNAIDS Technical Consultation on Male Circumcision

1. The research evidence is sufficiently compelling that male circumcision is efficacious in reducing sexual transmission of HIV in men.
2. Male circumcision does not provide complete protection against HIV
3. Correct communication and messages on male curcumcision and HIV are critical
4. The socio-cultural context should inform male curcumcision programming.
5. Human rights, legal and ethical principles should guide service delivery
6. The gender implications of male curcumcisions as an HIV prevention strategy must be addressed. The programmes are seen as an opportunity for educating men on gender issues and influencing behaviour.
7. Programmes should be targeted to maximize the public health benefit.
8. Health services need to be strengthened to increase access to safe male curcumcisions services.
9. Additional resouces should be mobilized to finance the expansion of these services.
10. Promoting male circumcisions for HIV positive men is not recommended.
11. Research is needed to guide programme implementation.

Vaccines for prevention

Vaccines, responsible for some of the most spectacular successes of international public health, are often viewed as the ideal answer to the prevention of infectious disease. There is no doubt that an effective and affordable HIV vaccine would be an enormous advance, fundamentally transforming the battle against AIDS and perhaps even offering hope of eradication. But such a breakthrough is a long way off because many questions on drug toxicity, resistance and effective ways to kill the virus remain unanswered.

Because of continuing limits to existing therapies—such as resistance, end-organ toxicity, side effects and impacts on quality of life—drug companies cannot cease their search for new, improved therapies. Among new drugs in development, the trend is to focus on stopping HIV from entering human cells and replicating. This new approach, used by the novel class of antiretroviral fusion inhibitors, is one of the principal interests among industry researchers. Different innovative ways of blocking entry of the virus are being explored in pharmaceutical laboratories, and drug candidates are at different stages of clinical development.

Advances in vaccine design, animal models and clinical research have recently converged to create a promising pipeline of candidate vaccines. But overcoming the remaining scientific, logistical and financial challenges requires a concerted effort of all stakeholders—academic researchers, pharmaceutical companies, philanthropic organizations, governments and communities. The need for an HIV/AIDS vaccine is overwhelming, because it is the best hope for stopping the spread of HIV worldwide. The prospects of global immunization may bring various outcomes, such as sterilizing immunity, transient infection, controlled infection or lack of onward transmission. In any case, the impact on disease contamination would be invaluable, as it would allow for stopping or at least slowing the spread of HIV/AIDS.

Under the best circumstances a useful vaccine will not be available in fewer than 10 years. According to the International AIDS Vaccine Initiative, there are two serious barriers to timely and efficient manufacturing of HIV vaccine.

First, most HIV vaccine developers work in academic institutions or small companies that lack access to the funding, expertise and specialized facilities to develop processes to manufacture promising vaccine candidates and to produce small lots of vaccine trials. If left unattended, these inefficiencies will lead to major bottlenecks in the coming years, as an increasing number of HIV vaccines move towards clinical testing (IAVI 2004).

Second, although poor countries urgently need an HIV vaccine, they have weak purchasing power. In consumer-driven research, investors do not regard developing countries as providing a viable market to justify early investment in an HIV vaccine. Experience with other new vaccines over the past three decades (such as the Hepatitis B vaccine) suggests that the delays could be 15 years or more. Particularly for Africa, such a delay in introducing an HIV vaccine would be catastrophic.

The halting of a Merck vaccine trial in November 2007, three years into the trial after its failure to demonstrate any protective effect, struck a demoralizing blow to those who were hoping for a scientific breakthrough. Some in the scientific community are coming to believe that the virology of HIV is just so complex that an effective vaccine may be out of reach for a very long time. This conclusion only reinforces the importance of implementing existing prevention strategies.

Conclusion

Reinvigorating prevention strategies

HIV prevention in Africa has reached a stage where decisive actions have to be taken. Across the continent, most programmes and services remain centralized in urban areas, are gender insensitive, and lack adequate targeting for core groups that fuel the epidemic such as sex workers and mobile populations. While many stakeholders are involved in prevention efforts, there is inadequate coordination. The multi-sectoral response remains inadequately defined in operational terms, and actions of non-health sectors remain minimal. It is our belief that efforts must now be made to bring a sense of urgency to HIV prevention and re-emphasize it as a fundamental priority of leaders, donors, and grassroots workers. Success will require greatly increased resources from donor nations as well as strong commitment from national governments to use the funds effectively according to the priorities dictated by their country-specific epidemic scenarios.

Winning the fight against HIV and AIDS requires sustained efforts to address underlying drivers of the pandemic such as poverty and gender and income inequality. Focusing on activities that specifically aim to limit the transmission of HIV, more than two decades of experience has shown that effective HIV prevention requires a combination of interventions, providing tools to address the various routes of infection as well as enabling those at risk to make use of these tools. The following interventions have been known to be effective.

- Population-wide communication campaigns conveying basic facts about HIV/AIDS and its transmission, promoting behaviour change, and combating harmful myths and stigma
- Non-stigmatizing programmes targeted at key vulnerable populations, including sex workers
- Distribution of the technical means of prevention e.g. male and female condoms
- Access to HIV testing and counseling
- Access to prevention and treatment of STIs
- Access to PMTCT services
- Precautions to prevent transmission in health care settings, including blood screening
- Male circumcision
- Legal and other measures to fight discrimination against PLWHA and vulnerable populations

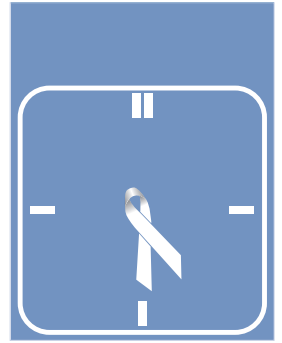
While all the above elements are important, clear priorities reflecting local circumstances are essential. In order to make a real impact in HIV prevention efforts, there is need for each country to establish an adequately resourced **National HIV Prevention Task Force** reporting to the national AIDS authority (chaired by the highest political authority in the country), to ensure appropriate oversight and follow up. It should not be a newly created structure, but rather a formalization of existing national coordination mechanisms focusing on HIV prevention. Ideally, it should consist of:

- A larger group of all key stakeholders including civil society and the private sector, to assume leadership and ownership of the strategy, and be responsible for coordination; and
- A smaller core group that drives the process, and which should be involved in all steps of planning and monitoring of the national HIV prevention response.

In conformity with the suggested roles and responsibilities for a national AIDS authority for HIV prevention, as outlined by UNAIDS in its 2007 HIV prevention guidelines (2007, box 6, p. 9), the Prevention Task Force should:

- *Define clear ambitious goals and targets for prevention.* Prevention needs to be infused with a new sense of urgency. There is an UNGASS goal of reducing HIV prevalence in young people, and a Millennium Development Goal to reverse the spread of HIV/AIDS by 2015, and attaining these goals needs to receive greater attention. Moreover, specific targets of coverage need to be set for all the key prevention interventions, and concrete actions taken in line with the overall prevention goal.
- *Mount sustained population-wide communication campaigns* conveying basic facts about HIV/AIDS and factors related to its transmission, promoting behavior change, and promoting attitudes of responsibility, solidarity and compassion. combating harmful myths and stigma. These should take the form of intensified campaigns using radio, television and print media, and involving government institutions, civil society groups and the private sector.
- *Organize community-based educational campaigns* that involve PLWHA, influential people in urban areas, village chiefs, and other leaders in local durbars. These campaigns should be implemented through tailored activities in the local community, and focus on conveying factual information, as well as addressing attitudes and practices that drive the spread of HIV in the community.
- *Ensure that means of protection against infection is accessible.* This includes ensuring that those who care for PLWHA can protect themselves from infection through availability of gloves, clean needles, and other technical means, ensuring that male and female condoms are available and accessible to those who wish to use them and ensuring that HIV test kits and STI drugs are available.

- *Declare Africa HIV Prevention Day:* The World Health Organization declared the first World AIDS Day in 1988. The day, 1 December, quickly became established as one of the world's most successful commemorative days. The day has been observed with press conferences and releases, radio and TV public service announcements and discussion programmes, with a thematic focus selected for each year. These thematic areas have ranged from prevention, to treatment, and to care and support. The activities have largely targeted people at the national and district levels. There is the need to declare a day that focuses solely on prevention and during which activities target people in their communities and families in their homes.



4. Treatment and Care

Chapter at a glance

Until the launch of the “three by five” initiative by WHO, discussions raged about whether it was feasible to provide HIV treatment in resource-constrained African settings. The rapid expansion in anti-retroviral treatment for people living with HIV and AIDS demonstrated conclusively that such treatment was both affordable and feasible. In 2006, providing universal access became a commitment adopted by the World Summit. The promise of universal access now dominates the debate on treatment and care—the question is no longer “if” but “how”. The benefits from expanding access to treatment, including the direct contributions to economies by those who would otherwise have succumbed to illness and death and their unmeasured contributions in social output are enormous while the cost of inaction is higher.

Building on numerous insights, comments and recommendations during CHGA’s Interactive Consultations across Africa, this chapter looks at the challenges and opportunities for governments to achieve universal access to antiretroviral therapy in Africa.

Providing universal treatment access is not an easy task. Given Africa’s limited resources and huge unmet demands for HIV and AIDS-related care, treatment access requires major expansion of health delivery systems and fundamental changes in how those systems are administered. Governments have a responsibility to promote access to antiretroviral therapy in the public sector and regulate its delivery and use by the private sector. Promoting access implies that the necessary skills and technologies to distribute the medication must be available. A major obstacle to this is the emigration of skilled professionals. Although a professional diaspora may bring significant benefits in remittances, it depletes skills that high HIV-prevalence countries cannot afford to lose. Current policies for reducing emigration through bonding, mandatory community service and ethical recruitment guidelines have had little impact.

Coordinated national and donor policies in the arena of human resources for health are required. African countries need to keep health sector salaries as competitive as possible between public service and the private sector. Donor assistance for this is needed. Countries should ensure the health of their health professionals, who should be protected from exposure to infection through the provision of

necessary equipment, and they must receive adequate insurance. This, together with providing competitive salaries, is important for the highest skilled providers to reduce emigration.

In order to make available large numbers of health professionals rapidly, it may be necessary to create new classifications for health professionals. In most sub-Saharan countries the shortage of nurses and other health workers is not as severe as that for doctors. The challenge is to use the limited numbers of skilled providers more efficiently. Because of the limited medical schools in Africa, there appears little alternative but to leverage the services of doctors by delegating more tasks to other health professionals, and in some cases, to community members.

Treatment provision in Africa is feasible

The prospects for expanded treatment and care programmes for people living with HIV/AIDS in Africa have greatly improved.

- 1 AIDS mortality has declined significantly in developed countries that have implemented anti-retroviral therapy, and in low- and middle-income countries, the expansion of anti-retroviral treatment programmes are also reducing mortality.
- 2 The UN General Assembly Special Session on HIV/AIDS committed to expanding availability of antiretroviral therapy, and the World Bank supports the idea that HIV/AIDS is a major threat to development.
- 3 The Global Fund to Fight AIDS, Tuberculosis and Malaria supports scaling-up through international transfers.
- 4 A significant share of the financial resources to deliver antiretroviral therapies is committed through developed country governments and philanthropic foundations.
- 5 UN organizations and bilateral donors adopted the “3 by 5” initiative to provide 3 million people with ART by the end of 2005. This was an initial step to create the necessary environment for universal access, according to the UN Millennium Development Goals and the Universal Access targets adopted at the World Summit.
- 6 Drug costs are lower, thanks to the availability and production of generic copies and price reductions by patent holders for proprietary drugs for poorer countries.

Most important is the commitment to universal access. Meeting in Gleneagles, Scotland, in July 2005, the G8 leaders adopted a commitment to “universal access” to AIDS treatment by 2010. This commitment was endorsed by all nations at the September 2005 World Summit. Universal access is more complicated than it might appear. One hundred per cent coverage is in practice impos-

sible to achieve, and in moving towards a realistic target of maximum coverage, the following principles have been agreed (UNAIDS 2007) to govern national plans and efforts:

- *Equity*: access must be available to all regardless of gender, wealth, ethnicity or any other non-medical criteria; groups such as commercial sex workers, men who have sex with men and injecting drug users must be included;
- *Accessibility*: facilities must be local and easily accessed, with meaningful information, that can be used without fear of stigma or discrimination;
- *Affordability*: cost should not be a barrier to uptake of any service or treatment;
- *Comprehensiveness*: prevention, treatment, care and impact mitigation must all be integrated in one package, and delivered with the full participation of all stakeholders in society;
- *Sustainability*: HIV is a lifelong challenge and all interventions must be made sustainable rather than being a one-off intervention. New technologies must be developed to meet people's needs.

Many countries are moving ahead with treatment programmes, but universal access to AIDS treatment is a major challenge for African governments and the international community (table 4.1). With AIDS financing improving, CHGA Interactive participants identified other structural impediments to fulfill the right to treatment (box 4.1) by improving access to AIDS treatment in Africa: among them poor health care infrastructure, poor quality services, shortages of human resources, low motivation of health workers and huge gaps in initial and continuing professional training. Of these, the greatest simple obstacle is the shortage of health care workers (MSF 2007). The focus here is on overcoming the functional bottlenecks in delivering health care and AIDS care. The challenges are great, but they can be overcome with a sustained sense of urgency, increased resources, effective partnership and careful planning.

The benefits from expanding access to treatment include the direct contributions to GDP of those who would otherwise have succumbed to illness and death and their unmeasured contributions in social output. The social benefits also include those from continuing support to both young and old dependents, especially avoiding most of the social costs from large numbers of orphans and vulnerable children. There is a separate and powerful case for pregnant women: mother-to-child transmission prevention programmes, relatively inexpensive and clearly beneficial to mothers and infants, can substantially reduce HIV transmission (CHGA 2004e). These benefits accrue to society.

Box 4.1

AIDS and International Guidelines for Human Rights

In 1997 the Joint United Nations Programme on HIV/AIDS published guidelines for HIV/AIDS and human rights. Of particular interest here is Revised Guideline 6, which deals with equal access to health care.

- States should enact legislation to provide for the regulation of HIV-related goods, services and information, in order to ensure widespread availability of quality prevention measures and services, adequate HIV prevention and care information, and safe and effective medication at an affordable price.
- States should also take measures for all people, on a sustained and equal basis, the availability and accessibility of quality goods, services and information for HIV/AIDS prevention, treatment, care and support, including antiretroviral and other safe and effective medicines, diagnostics and related technologies for prevention, cure and palliative care of HIV/AIDS and related opportunistic infections and conditions.
- States should take such measures at both the domestic and international levels, with particular attention to vulnerable individuals and populations.

Source: UNHCHR/UNAIDS 2002

Table 4.1

Progress towards Universal Access for antiretroviral therapy: 2006

	Estimated number of people receiving ARV therapy, December 2006	Estimated number of people 0-49 years old needing ARV therapy, 2006	ARV therapy coverage, December 2006	Estimated number of people receiving ART, Dec 2004
WHO region				
Sub-Saharan Africa	1,340,000	4,800,000	28%	310,000
North Africa and the Middle East	5,000	77,000	6%	4,000
Latin America and the Caribbean	355,000	490,000	72%	275,000
East, South and South-East Asia	280,000	1,500,000	19%	100,000
Europe and Central Asia	35,000	230,000	15%	15,000
Total	2,015,000	6.5 million	28%	700,000

Source: WHO, UNAIDS and UNICEF 2007.

Note that in sub-Saharan Africa, access to paediatric AIDS treatment lags behind adult treatment. According to WHO data for 2006, just 85,000 [77,000-93,000]

children under 15 years were receiving treatment from an estimated in-need population of 680,000 [510,000-890,000], a coverage of 13%. (WHO, UNAIDS and UNICEF 2007). Only Botswana, with 93% coverage, has met the target figures for universal access. In Nigeria the coverage was just 3% and in Zimbabwe 6%. The goal of universal access to treatment demands that special efforts to extend paediatric AIDS treatment be made. This is a challenge that extends from the development of drugs with the required calibration of dosages to special monitoring systems and the integration of treatment with care and psycho-social assistance. In 2006, WHO issued new guidelines for the treatment of children with HIV and AIDS, specially tailored for resource-limited settings (WHO 2006).

Costs and benefits of treatment

“The costs of HIV/AIDS to societies and economies are much greater than those usually quantified by economists, so the benefits from treating people will also be greater, once there is a full accounting for the losses.” Participant, CHGA Interactive: Botswana .

Comprehensive antiretroviral therapy programmes are feasible. At the peak of demand, in 2012, a publicly funded comprehensive HIV and AIDS treatment programme in South Africa is projected to cost 1.74% of GNP. That includes antiretrovirals, training, infrastructure improvements and related inputs. The share of health spending in GNP would rise from 3.7% to 5.4%, with antiretroviral therapies accounting for 99% of the additional cost (Geffen and others 2003). In South Africa in September 2006, 49,000 men, 114,000 women and 18,000 children were receiving treatment, representing just 18% of the adults and 21% of the children in need of treatment. This mismatch of demand and supply is in line with CHGA’s observations across the continent. The distance to go is substantial but achievable, with good leadership and adequate resources (CHGA 2004d).

Some of these additional financial costs are offset by reductions in spending on opportunistic infections and hospital and related care—and savings in other areas of the budget, such as child welfare and support for affected families. Anti-retroviral therapy leads to substantial savings of health resources given rapid improvements in the health of patients. There are major human resources gains from expanding access to antiretroviral therapy simply from reducing opportunistic infections.

The projected cost of antiretroviral therapy is uncertain, but if recent trends indicate the likely movement of financial costs, they indicate that following the dramatic price reductions of 2000-2001, when the costs of anti-retroviral drugs fell by about nine-tenths, further price reductions have continued (figure 4.1). The

greater availability of generic drugs for opportunistic infections and lower cost antiretrovirals has sharply reduced the costs of programme delivery, and prices may fall further. A first-line generic antiretroviral is now available for less than \$100 a year, and it has the added advantage of being taken only twice a day, reducing the risks of patients not adhering to the treatment. And there is some evidence that alternative treatment regimes, such as structured treatment interruption, may further reduce the costs of antiretroviral therapy (various pilots to test these possibilities are under way in Africa). Other possible cost reductions relate to lower costs of laboratory services (such as the price of CD4 and viral load tests) and improvements in technologies for personal monitoring. The development of simplified technologies and use of dry blood spot strategy will also have an important impact on cost reductions and enhance the access to diagnostic and treatment monitoring tests in resource-limited settings. The main projected increase in medications will occur if there is widespread resistance to the major drugs utilized today, leading to a reliance on a new generation of antiretrovirals.

It is important to emphasise that these costs refer only to adult treatment, for which standardized regimes and fixed-dose combinations are appropriate in the great majority of cases. Regarding paediatric HIV and AIDS, these standardized medications are often clinically inappropriate, because children are small in size and developing physically. While paediatric drugs have come down in price, they are still more expensive than adult drugs, and the diagnostic and monitoring requirements may be more complex. Children living with HIV and AIDS also need special efforts to meet their psychosocial needs (Richter, Foster and Sherr 2006).

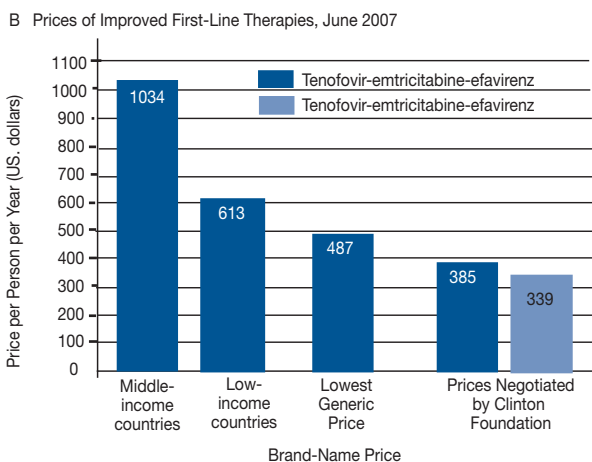
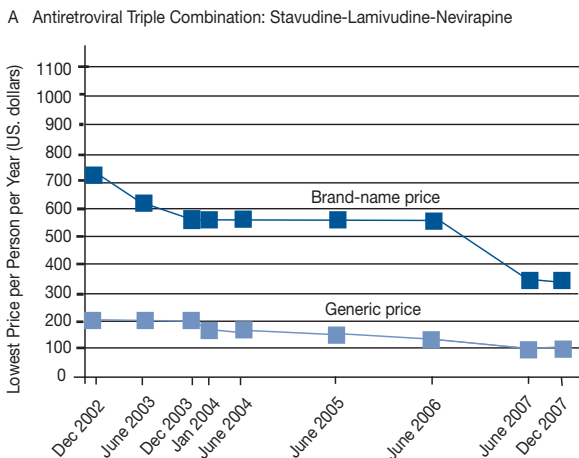
In resource-limited settings it is essential that cost-benefit calculations accurately reflect the choices for African countries. The evidence supports the argument that the total benefits from increasing access to antiretroviral therapies exceed the full costs – drugs, voluntary counselling and testing, training, infrastructure, counselling and adherence – even in the poorest countries (CHGA 2005d).

In addition, it can be demonstrated that comparing the costs of access of antiretroviral treatment relative to GDP per capita (as a measure of benefit) is misleading for policymakers. Such calculations are too static. In budget-constrained situations, if saving a life costs less by spending on malaria than by incurring annual costs over some unknown period on antiretroviral drugs, the choice may well lie with the former. But policymakers face an epidemic, which because of its scale, is generating large socioeconomic costs, both measurable and unmeasurable: greater societal insecurity, worsening economic performance, increasing poverty and widening income and wealth distributions (see chapter 2).

Figure 4.1

A first-line generic regimen is now available for \$100 a year

Lowest world prices per-patient-per-year for sample antiretroviral therapy regimen (U.S. dollars)

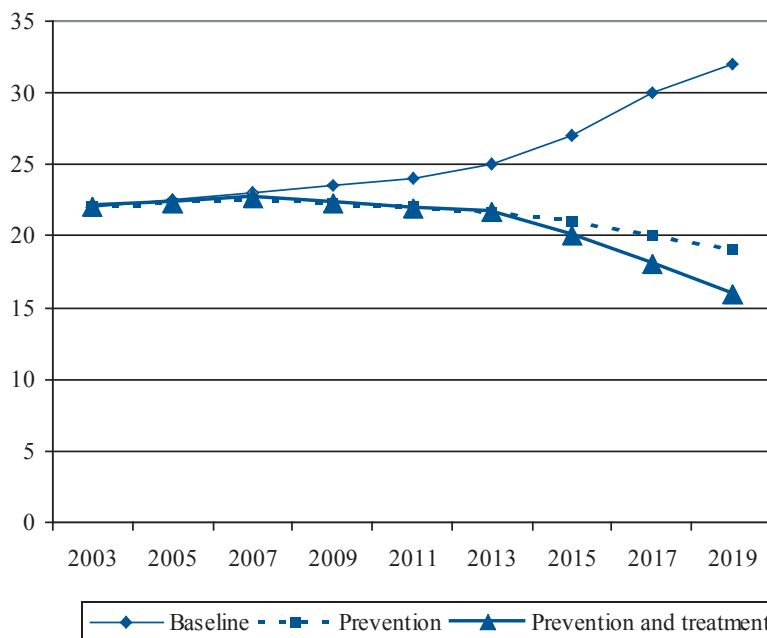


In making a case for treatment, the CHGA is not suggesting that antiretroviral therapy is a substitute for HIV prevention programmes. Instead, treatment and care must stand alongside prevention as pillars of a comprehensive and mutually sustainable response. This was one of the central messages of the Commission’s consultation on scaling up treatment programmes in Africa. Participants argued that greater access to treatment offers an opportunity to strengthen HIV prevention efforts. One participant put it this way, “We are confident that access to antiretroviral therapy will increase the incentive for people to be tested for HIV, reduce the stigma associated with HIV/AIDS, attract individuals to health care settings in which prevention messages can be delivered and reinforced, and provide an opportunity to address individual concerns and questions from those seeking counselling and testing” (CHGA 2004a).

CHGA simulations for sub-Saharan Africa strongly support this view. Using methods devised by Salomon and others (2005), we find that when treatment is scaled up without strengthening prevention, the number of people on treatment is projected to reach 9.2 million. But if prevention is scaled up with treatment, only 4.2 million people would need treatment. Combined prevention and care bring substantial synergies, with the potential of reversing the spread of HIV and AIDS (figures 4.2 and 4.3). Over the long term, integrated provision of prevention and care steadily reduces the number of people living with HIV and AIDS, increasing the likelihood that the AIDS response can become financially sustainable.

Figure 4.2
Prevention combined with treatment would reduce the number of Africans living with HIV/AIDS by 7 million by 2019

(People living with HIV/AIDS in Sub-Saharan Africa, projected (millions))



Source: Salomon and others 2005.

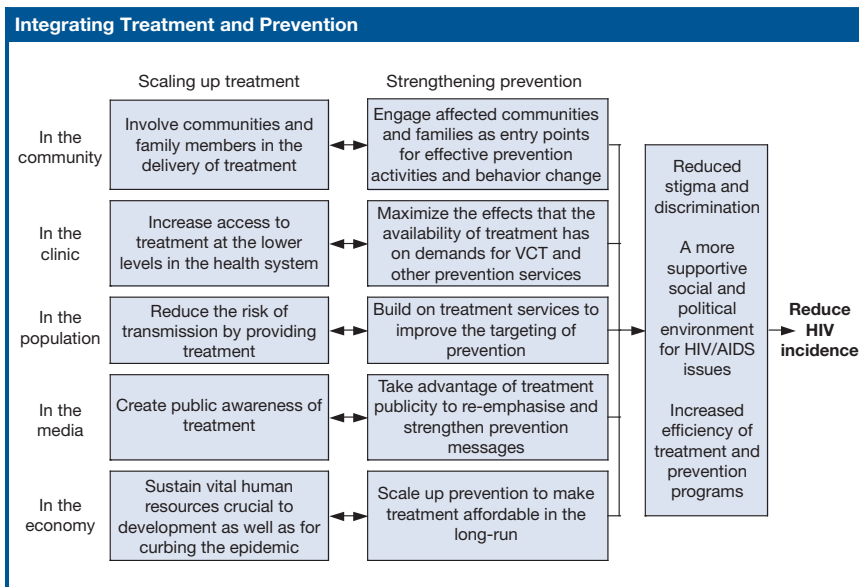
Treatment bolsters prevention

Greater demand for testing. Knowledge that treatment is available motivates people to learn about their status. Testing is an opportunity for prevention counselling and a link to other prevention services, including those for sexually transmitted infections and vertical transmission from mothers to babies. Several small treatment programs in Africa have seen large jumps in testing. Médecins sans Fron-

tières reports that the number of people coming forward for testing has increased 12-fold since 1998 in the area surrounding the South African township of Khayelitsha (MSF South Africa, Department of Public Health of the University of Cape Town and the Provincial Administration of the Western Cape 2003). A 2002 survey of nine sites found that residents had reported the highest male condom use and the greatest willingness to use female condoms, be tested for HIV and join an AIDS club (CADRE 2002).

Figure 4.3

How integrated treatment and prevention reduce the incidence of HIV



Using evidence from small-scale pilot programmes, the participants of two CHGA Interactive sessions identified several ways for effective treatment to bolster prevention.

Less stigma. HIV and AIDS have created a legacy of moral judgementalism, fear and hopelessness, fertile ground for stigma and discrimination and barriers to treatment. Openness among political, social, business and labour leaders about HIV and AIDS and its transmission reduces stigma and increases communities’ willingness to engage people living with HIV and AIDS. Increasing access to treatment may reduce stigma by mitigating the fear that is one source of stigma and by demonstrating that the lives of people living with HIV are valued. In the words of a CHGA Interactive participant, “While this effect is hard to measure, it makes intuitive sense, and there seems little doubt that stigma has decreased in the developed world since the advent of treatment.”

More efficient targeting of prevention programmes to people living with HIV. There is much interest in developing stronger prevention programs for HIV-positive people. These measures include group and individual counselling and help with partner notification, which would ideally be integrated into treatment and care but need not occur in clinical settings (International HIV/AIDS Alliance 2003). There is little evidence on these interventions (CDC 2003). Expanded treatment can give this “prevention for positives” approach an important boost by encouraging more people to know their status and by bringing them into contact with the health system.

Less transmission. Infectivity—the likelihood that an infected person will pass the virus to an uninfected individual during sexual intercourse or other modes of exposure to infection—is thought to depend in part on the viral load, that is, the concentration of viral particles in the blood or semen (Quinn and others 2000). Routinely reducing the viral load by several orders of magnitude, antiretroviral treatment has been shown to reduce transmission risk in sero-discordant couples (Castilla and others 2005). This biological effect, however, would reduce transmission for a population only if not offset by increased risky behaviour. Complicating things, the period of highest infectivity is soon after initial infection, when viral loads are very high, at a time when newly infected individuals generally will not know that they carry the virus.

There are increasing data on the effect of widespread treatment on transmission at the population level. A study in rural Uganda has demonstrated that providing anti-retroviral therapy, along with prevention counselling and partner voluntary counselling and testing, was associated with reduced sexual risk behaviour and lower risks of HIV transmission (Bunnell and others 2006). An early modelling study concluded that treatment could significantly lower transmission but that the effect could be negated by changes in behaviour (Blower and others 2003). A second study modelling the possible effects of expanded access to treatment in Sub-Saharan Africa also found mixed effects on new infections in the absence of concurrent expansion of prevention. But it argued that if both are scaled up, the availability of treatment might greatly enhance the effectiveness of prevention (Salomon and others 2005).

Community mobilization. The most powerful benefits of treatment may come from mobilizing communities to take responsibility for fighting the epidemic. Caring for people with AIDS has been a basic element of community response to the epidemic where prevention has succeeded, in Uganda and in the segments of the western gay community (Low-Beer and Stoneburner 2003). Strong community involvement in treatment programmes, in decision-making and in delivering care could reinforce this broad community response and set in motion a virtuous cycle of decreased stigma, open discussion and changed behaviour. This is what appears to be happening in Khayelitsha, South Africa (see Box 4.2) (MSF

South Africa, Department of Public Health of the University of Cape Town and the Provincial Administration of the Western Cape 2003). But to unleash these powerful forces, treatment programmes must build strong ties to communities. Where they haven't done this, the benefits have not materialized.

Box 4.2

Lessons from Khayelitsha, South Africa

- The primary health care system can be mobilized to supply AIDS treatment within an integrated set of related services that includes voluntary counselling and testing, treatment of opportunistic infections and psychosocial support.
- Treatment services can be decentralized down to the primary level to ensure coverage and community involvement.
- Simple regimens with standardized clinical guidelines encourage adherence of patients and simplify the work of health professionals.
- Multidisciplinary teams—for nurse-based care with a focus on psychosocial support—use resources more effectively and provide more holistic care.
- Comprehensive care that includes a wide range of support is essential for ensuring high adherence to antiretroviral therapy.
- Community education on the value of antiretroviral therapy is essential for informing people about effective use of antiretroviral therapy and for increasing community understanding of what constitutes a supportive environment for individuals and families.
- The cost of antiretroviral drugs can be made more manageable through the use of generic drugs and through reductions in the cost of laboratory tests, so that many more people can afford antiretroviral therapy.

Source: MSF 2003.

Working in partnership across sectors to ensure consistency. Throughout the continuum of prevention, treatment, care and support, it is important that those involved send out consistent messages and coordinate their programmes in order to gain greater effect of their efforts. For example, one CHGA meeting participant mentioned the example of a country where there had been a drive to motivate people to come forward for testing, while not ensuring that there were enough test kits available to accommodate for the increased demand. Those who were turned away for lack of test kits will be very difficult to motivate to come forward again, and such lack of coordination also lowers the general trust in the service delivery sector, a critical factor when working with HIV/AIDS.

Bottlenecks to treatment must be overcome

Across sub-Saharan, Africa HIV and AIDS accounts for roughly 18% of the disease burden but places a disproportionate burden on health services (CHGA 2005c). In Zambia, HIV-related conditions account for an estimated 40% of in-patient admissions and 70% of admissions to medical wards (CHGA 2005c). Added to this heavy case load is the complexity of the disease. Most African countries face the malfunctioning of the service system and the demands of the epidemic, the first a long-term development problem, the second still unfolding (CHGA 2005b).

Needed, therefore, is gradual strengthening of the health service system in conjunction with urgent and effective action to control the epidemic. Chapter 3 covers prevention and will not be dealt with here. Instead, the focus is on three core challenges facing health systems in Africa: demand, supply and governing health workers and health systems (figure 4.4).

Demand-side challenges to scaling up AIDS treatment in Africa

The demand-side challenges are associated with the unprecedented burden of advanced disease, the dangerous patient presentation profiles and the incredibly constrained timeframes for interventions to yield the required impact. The broader ramifications of these challenges are:

- 1 *An advanced epidemic with a large cohort of critically ill (or soon to be critically ill).* Patients with advanced HIV disease impose exponentially higher resource and care needs on already overburdened and understaffed health facilities. In the process the epidemic allows for very little time for initiatives to build capacity and deliver results.
- 2 *Low levels of knowledge of HIV status.* In Africa, the majority of people infected by HIV do not know their status. Data from various surveys conducted between 2003 and 2005 indicated that between 3.8% (Ethiopia) and 13.1% (Kenya) of women knew their status; while about 15-25% of HIV positive women knew their status. Among men the figures were somewhat lower (WHO, UNAIDS and UNICEF 2007: 35). There are sharp urban-rural differences and educated-less educated gradients in the numbers who have been tested for HIV. Most people with HIV tend to be identified only when they have to interact with the health establishment due to symptoms related to HIV/AIDS (see Box 4.3). By then, they may already have a severely damaged immune system, and emergency treatment intervention stresses scarce resources
- 3 *Vicious feedback loops in patient queues.* The natural triage at the point of care creates functional bottlenecks because the sickest patients require the most time. This often results in a downward spiral of ever-increasing demand. The de facto criterion that gets someone to the front of the line is being closest to death.

Box 4.3

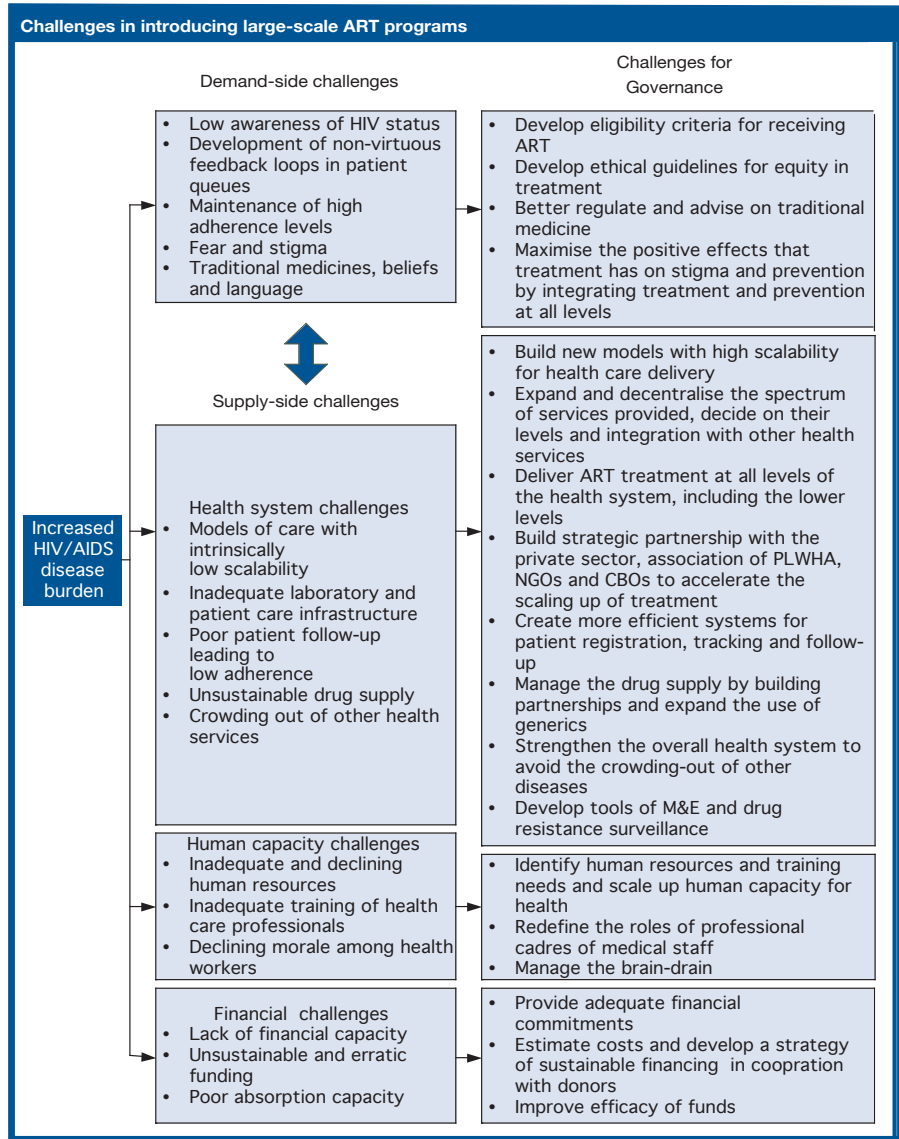
Testing for HIV: Opt-in vs. opt-out – lessons from Botswana

As part of the struggle with a mature and widespread epidemic, Botswana offers routine HIV testing to anyone who presents at a public health facility for medical attention. Routine HIV testing does not mean that the test is compulsory: the patient can choose to opt out of having the test. This does, however, mark a departure from the previous patient-initiated ‘opt-in’ approach to HIV testing. The programme approach stresses the individual’s right to know – to be diagnosed and treated for which ever disease they may have, and routine testing is seen as an important strategy in fulfilling this right.

Routine testing is an attempt to diagnose people as early as possible, enabling targeted and timely interventions and health-boosting life style changes on the part of the individual. The programme also stresses that routine testing forms part of ‘normalising’ HIV testing and care, providing an approach where HIV is not seen as something exceptional requiring special routines, but rather as a normal chronic disease which can be diagnosed and treated. Routine testing is therefore seen as contributing to the reduction of HIV-related stigma. Emerging experiences from Botswana indicate that the availability of routine testing and follow-up indeed reduces stigma (CHGA 2004a).

Other African countries, including Ghana, Kenya and Malawi are also offering routine HIV testing to selected groups, particularly pregnant women as part of programmes to prevent mother-to-child transmission. In Kenya, the numbers of women tested increased markedly in August 2003, when the routine testing approach was adopted, allowing adoption of appropriate interventions, such as counselling, and medical interventions to minimise the risk of transmission of HIV from mother to baby (Mutsotso 2005).

- 4 Treating opportunistic infections. Most people living with HIV/AIDS seek medical treatment when they experience one or more infections associated with the breakdown of their immune systems (CHGA 2005d). The most common opportunistic infections associated with HIV/AIDS are tuberculosis, skin diseases and fungal infections. Because AIDS makes people more susceptible to opportunistic infections, it triggers growth in tuberculosis, which also increases the demands on the health system for care and support.
- 5 *Giving priority to access to treatment.* As more people are tested for HIV and seek appropriate treatment, demand will exceed the abilities of governments and private firms to respond. A challenge for health workers and managers is to establish and enforce guidelines for determining who gets access to treatment. Each country must decide on a priority system that most fully reflects their ethical concerns about equitable access, political interests and health and social service delivery responsibilities and capabilities—not only for HIV/AIDS but for other health issues as well (box 4.4).

Figure 4.4**Challenges in introducing large-scale antiretroviral therapy programmes**

6 *Maintaining high adherence.* Even though appropriate treatment with antiretroviral drugs can dramatically improve a patient's clinical status, antiretroviral therapy requires high levels of adherence to the regimen. If the supply of antiretroviral therapy drugs is disrupted or patients do not follow the prescribed course because of costs deterring regular purchase of drugs or for other reasons, drug-resistant forms of HIV may appear. The preva-

lence of drug resistance in some developed countries among people who have never received treatment ranges from 5% to 27% (WHO 2003). The consequences of resistance are both clinical and economic. If widespread resistance to first-line drugs develops, there will be more treatment failures, and more expensive second-line drugs will need to be used more frequently. Fixed dose combinations have a positive impact on treatment adherence and are increasingly effective from a clinical, programmatic and economic point of view. The importance of fixed dose combinations is recognized by WHO in its guidelines for anti-retroviral therapy.

Box 4.4

Equity in access to treatment

The World Health Organization (WHO) urges governments and communities to discuss who will receive antiretroviral therapy before it is universally available. This may be one of the most difficult governance processes related to treatment. The WHO argues:

“It will...be important to ensure that treatment programmes are not concentrated only in better-resourced urban settings. While there are many ways of determining which patients should be selected for antiretroviral treatment, a method should be chosen that is widely accepted as being the fairest and most medically appropriate. The most equitable selection criteria for patient selection are based on clinical eligibility. Principles of promoting and protecting human rights, transparency and ensuring greater involvement of people with HIV should also inform the development of selection criteria. The issue of equitable access to ARV treatment may be controversial but there must be a starting point. Members of the community and people with HIV should be involved in the often-challenging decisions about who should be offered treatment first.” (WHO 2003).

Countries are likely to find that criteria other than clinical ones come into discussions about access to antiretroviral therapy. A participant at the CHGA regional meeting on treatment stated: “We need to assure that people who have high levels of education and fill important posts in government and businesses receive treatment.” Another felt otherwise: “Everyone is important and makes contributions to society. For now, it has to be first come, first served.” Yet a third participant argued, “Women with children who might become orphaned should have priority in getting treatment.”

Clearly, there are no ready answers to who will have access to antiretroviral therapy. But in several CHGA meetings, participants emphasized that all stakeholders should engage in thoughtful discussions to determine criteria and ways to enforce the decisions reached.

Supply-side challenges to scaling up AIDS treatment in Africa

The supply-side challenges are the logistics of tackling demand with gaping deficits in political will, health systems (including leadership and management), human resources, technical expertise, physical infrastructure, equipment and supplies. Underlying the supply-side challenges is rebuilding public health and

social support systems (see figure 4.4). The main strategies to overcome the barriers to supply of treatment are:

- 1 *Adopting models of care with intrinsically high scalability.* The vast majority of African countries use the western referral model of care with large numbers of specialized health workers, largely untenable for managing HIV and AIDS and opportunistic infections. Rigid staff definitions hinder job sharing and cross-training. In addition, HIV and AIDS treatment runs the risk of becoming a vertical programme, focused on a limited set of technical interventions offered without reference to people's social environment and insufficiently integrated with other health care provision. The reality is that people living with HIV and AIDS live and work in communities not in health facilities. The challenge is thus to maintain large numbers of people living with HIV and AIDS in their communities and sustain them on long-term therapy with high compliance and adherence. Urgently needed are large-scale integrated public health models for addressing antiretroviral therapy and other forms of HIV and AIDS care and treatment at the primary care and community levels.
- 2 *Redefining professional roles.* Developing and refining public health models for HIV/AIDS treatment and care will involve extensive assessments, stakeholder discussions and pilot tests. Among the likely issues: redefining and devolving roles and schemes of service and reviewing professional licensure and accreditation requirements for health staff at all levels. Pilot projects show that some tasks related to antiretroviral therapy, such as routine follow-ups and counselling, can be carried out by lay community workers, trained and supported by referral systems. Technology offers many exciting possibilities for leveraging rare skills and expertise over large numbers of mid-level and alternative health providers, possibilities to be investigated. Mobile health services need to be refined, adapted and used to extend antiretroviral therapy into widely dispersed communities. Any approach (or set of approaches) will benefit from leadership, sound feasibility studies and policy or regulatory guidance.
- 3 *Increasing skilled human resources for health.* Most national or local health services are inadequately staffed to provide HIV/AIDS treatment and care and serve people with other needs. The Joint Learning Initiative on human resources for health estimated that Africa needs one million additional health professionals in order to meet the WHO's minimum staffing for health care provision (Joint Learning Initiative 2004). Providers are getting sick at high rates, adding to losses of personnel who move to the private sector or other countries. Health reforms adopted in many countries in the 1990s need to be reviewed in the light of current and future staff needs, including terms of service. Organizations representing health workers and governments need to keep personnel in place and improve their motivation, working environments and incentives. Program implementers must also tackle the reluctance of many health workers to work in rural locations. Without providing adequate antiretroviral therapy services where they are needed, the prevailing

urban bias in medical care will continue, and many poorer people will be denied services.

- 4 *Training health care professionals.* Training for health providers to deliver antiretroviral therapy and relevant supportive, logistical and monitoring services remains limited. A Kenyan study shows that only 30% of doctors prescribing antiretroviral drugs had received training in administering and monitoring antiretroviral therapy (Livesley and Morris 2004). There is a clear need to develop rapid training methods in order to expand services across all cadres involved in antiretroviral therapy.
- 5 *Meeting the costs of treatment and care.* The cost of antiretroviral therapy drugs has declined substantially in recent years, but the price is still prohibitive for most Africans. Under a scenario of antiretroviral drugs at \$1 a day, the drugs would cost 75% of the average monthly income of \$40 in Kenya (World Bank 2005). At the national level, treating 25% of all HIV-positive individuals in Kenya would cost 6.3% of GNP, more than seven times the government's spending on health. The reduction in the cost of antiretroviral therapy has substantially brought down this amount, but it still remains prohibitive in relation to resource availability.

For scaling-up to be successful, the price of antiretroviral therapy and related interventions needs to come down to a level that African governments can budget for sustainably. National budgets will supplement funding available from international initiatives, which often have limited time spans. Budgeting for antiretroviral therapy requires a vision and commitment to sustain funding for at least five decades and perhaps longer. Once started, antiretroviral therapy must be provided for the patient's lifetime, and millions will need antiretroviral therapy in the coming years. The sustainability of funding for HIV/AIDS initiatives raises numerous political and ethical issues that can be resolved only with committed leadership. Funding for antiretroviral therapy also challenges governments to consider an acceptable degree of dependency on external funding.

- 6 *Developing a patient care infrastructure.* Health personnel need infrastructure to support their technical and interpersonal skills. Functioning laboratory and testing facilities must be available if antiretroviral therapy programmes are to succeed. The infrastructure often cannot support the complex provision of antiretroviral therapy. In Kenya no laboratory facilities were available outside Nairobi to regularly monitor patients' progress with antiretroviral therapy. So they had to travel to the capital for follow-up consultations, adding to their personal costs. At least in the early stages of antiretroviral therapy rollout, some countries may decide to focus limited HIV and AIDS resources on central locations while outlying systems are strengthened. Such a decision would have direct implications for availability of services for thousands unable to reach centres where antiretroviral therapy is available. Part of the antiretroviral therapy and health system infrastructure will be simple technologies appropriate for use in smaller clinical settings with non-physician staff, perhaps simplified CD4 tests and viral load tests.

- 7 *Increasing patient follow-up to increase adherence.* Patients must take antiretroviral drugs regularly. If random interruptions occur, the virus is likely to mutate into drug-resistant strains. The lack of adherence to treatment is not a new problem. For example, the emergence of multidrug-resistant tuberculosis is related to the lack of adherence to treatment and inappropriate drugs. As a lifelong, complex and time-demanding treatment, antiretroviral therapy complicates adherence. Close patient follow-up increases adherence, but this is a challenge in resource-constrained African settings. Experience from Botswana reveals that paper-based systems of monitoring and follow-up work well when the patient numbers are small. But as the numbers increase into the thousands, paper-based systems become unmanageable. A combination of paper and electronic systems may become necessary, with implications for capital equipment and training budgets.
- 8 *Sustaining drug supplies.* A discontinuation in drug supply increases the risk of failed treatment, detrimental not only to the patient but also facilitating drug-resistant strains. Periodic drug shortages are not uncommon in Africa, as with those in Kenya in 2003. At the national level the challenge is to build strong drug procurement and distribution systems, avoiding supply interruptions and leaks and ensuring drug quality. At the project level, logistics are crucial, ensuring safe drug storage and distribution. In-country registration procedures and requirements need to be simplified for the efficient and rapid introduction of new drugs, including formulations for children.

Influence of stigma on patient behavior

According to CHGA participants, while geographic and financial barriers are highly effective in curtailing the demand for ART, there is another factor at work that is even more powerful. In all countries, patients are reluctant to acknowledge that their symptoms might be caused by HIV, because of the stigmatising reactions of family, friends, co-workers and employers to this diagnosis. In order to avoid encountering reactions of hostility, ostracism and rejection, many patients preferred not to know their serostatus, and avoided seeking treatment when it could not be passed off as treatment for “ordinary” illnesses. One important consequence of stigma is that the take-up of voluntary counselling and testing (VCT) programmes is very modest. The figure is frequently quoted that less than 1 in 10 infected persons is aware of their infection. Since a confirmed diagnosis of HIV is a prerequisite for entry to ART programmes, the reluctance to be tested constituted an important bottleneck.

The widespread fear of stigma is held accountable for the relatively low uptake of the PMTCT programme in countries where treatment is free. In the case of Botswana, for example, despite the fact that the service is available at every antenatal centre in the country, only 26% of pregnant women availed themselves of the opportunity to protect their unborn child. Over half refused to take a test,

and nearly half of those who tested positive did not go on to accept treatment (CHGA 2004a).

By extension, there was a reluctance to disclose HIV positive status, even among those who had been tested and were on treatment. At one ART site in Kenya, the programme director bitterly recounted that he had been unable to persuade a single patient to publicly disclose his or her status and undertake educational activities among the community. Furthermore, he was aware of the deliberate intent of the majority of young women that he treated not to disclose their serostatus to intimate partners, for fear that it would nullify their ambitions to marry and have children. Lack of disclosure carries the further implications that the patient cannot benefit from community support, and is unlikely to discuss or practice safe sex with partners. If the patient has not disclosed to close family members, he or she may have difficulty in taking pills regularly in view of the family.

Community participation in HIV prevention, care and treatment

The extent to which ART sites were linked with, and benefited from, strong links with community organisations varied considerably between countries and individual sites. With minor exceptions, these links were weak or absent at the majority of sites observed by CHGA.

Among the factors that discouraged community participation were the recruitment of patients from a large geographic radius, high levels of stigma in the community, and receiving treatment from for-profit providers. At one site in Kenya, it was explained that there was no natural community in the immediate vicinity of the hospital. The land was divided up into tea estates which were worked by migrant labourers from distant districts, whose movements were restricted by the estate owners and where visitors were discouraged. It was considered a major achievement when a health educator was allowed access to a number of these estates to talk about HIV and the availability of treatment. At another site, the hospital served an amorphous population of half a million, mostly working in the much expanded industrial zone, but a satellite health centre in a rural part of the same district was surrounded by a more conventional rural community. There it had been possible to induce a local chief to donate land which was cultivated by women receiving ART and thereby met their income and nutritional needs.

By contrast, there were some powerful examples of communities assisting in the care and treatment of HIV patients in Uganda. At the Masaka Regional Hospital, an ART programme was established in 2002 under the “Uganda Cares” initiative, a partnership of the Ministry of Health, the Uganda Business Coalition on

HIV/AIDS, and an international AIDS organisation, AIDS Healthcare Foundation/Global Immunity. All patients enter the programme by referral from partner organisations, TASO Masaka (The AIDS Support Organisation), Kitovu Mobile Homecare Services, and the VCT centre at the hospital. Recently, some children have been admitted from AIDCHILD, an orphanage. These community organisations have not only supported HIV patients at earlier stages of their illness, but they have helped prepare them for ART treatment. Should they miss an appointment, it is the community organisations who follow up, who know where the patient lives, and who make the effort to bring the patient back into compliance with the treatment schedule. TASO employed a total of 45 persons in Masaka, of whom 14 were community-based counsellors covering the entire spectrum of HIV care. There were also unpaid volunteers, who were motivated to work in the programme by the support which they themselves had received as people living with HIV.

At the Arua Regional Hospital, where MSF (France) managed the ART delivery programme, TASO had provided support in setting up the counselling unit and in training the treatment counsellors. NAGWOLA (the National Community of Women Living with AIDS) has about 20 trained counsellors, many themselves on treatment, educating patients and the community about HIV/AIDS matters including ART. It also has a major role in nutrition support. NAGWOLA has an office on the hospital site, and receives support from the World Food Programme to provide nutrition support to patients in need.

In Malawi, the MSF project in Thyolo District has strong community links. The local authorities and civil society organisations are enlisted in HIV prevention activities, traditional healers are involved in treatment and education concerning STIs, while traditional birth attendants are involved in PMTCT. There is a home based care programme, which provides access to treatment and prophylaxis of opportunistic infections, nutritional support for the malnourished and socially destitute, and palliative care for the terminally ill. Home based care is professionally organised, but depends on dozens of volunteers, some but not all of whom are HIV positive. VCT is available at three locations within the district, the plan is to extend it to a further 6 centres. Patients found to be HIV positive may be referred to the home based care programme, or to the ART clinic if warranted by the progression of their illness. After initiation of treatment at the district hospital, some patients may obtain their maintenance therapy at out-lying health centres nearer to their place of residence. The MSF programme is very consciously attempting to develop a model which will make the continuum of care, including ART, accessible, affordable and culturally acceptable for all HIV patients living in the rural areas of one of the poorest countries in the world (MSF 2006).

Human resources for health must be a priority

Human resources—the different kinds of clinical and nonclinical staff who make each individual and public health intervention happen—are the most important health system inputs. The performance of health care systems depends ultimately on the knowledge, skills and motivation of persons responsible for delivering services.

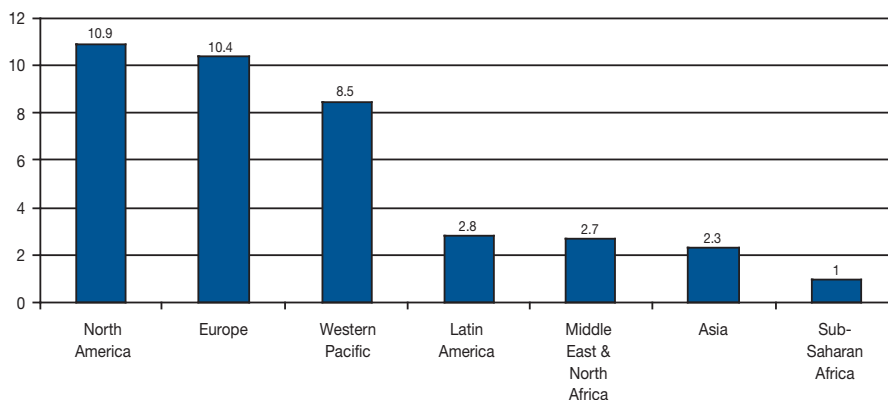
Much of the debate about scaling up efforts to achieve the Millennium Development Goals has focused on mobilizing sufficient financial resources. But human resources are likely to pose a more binding constraint. The countries with the most pressing health needs—many of them in sub-Saharan Africa—are also those with the weakest human resource base. The need to respond to the HIV/AIDS pandemic only intensifies the competition for limited resources.

Good health care is the result of many complementary inputs that include drugs, infrastructure and medical personnel, with skilled providers one of the most essential ingredients, evident in the strong correlation between health provider numbers and health service coverage. CHGA found that a density of about 1.5 health workers per 1,000 people is on average associated with 80% coverage with measles immunization and 2.5 health workers per 1,000 people with 80% coverage of births with skilled attendants. While Europe and North America have more than 10 health workers per 1,000 people, sub-Saharan Africa has closer to 1 (figure 4.5). Not enough workers are entering the public health sector, and too many are leaving.

How many additional health workers are needed for Africa? The answer depends on staffing ratios and other aspects of the service delivery systems. WHO estimates that some 100,000 health workers will need to be trained to reach the target of 3 million people on treatment (WHO and UNAIDS 2004). Another more recent analysis suggests that 20,000–120,000 medical staff will be needed to provide 3 million patients with antiretroviral therapy, depending on staffing ratios and what clinical officers do (WHO and UNAIDS 2005). The Joint Learning Initiative (2004) estimate of one million includes workers for all elements of a health-care system, about three quarters of whom are auxiliaries and other health workers without formal qualifications as nurses, midwives, pharmacists or physicians.

Figure 4.5**Africa has the lowest health worker density**

Health workers per 1,000 people



Note: Health workers include doctors, nurses and midwives.

Source: Computed from WHO database for health personnel (2004).

In response to this, Prime Minister Tony Blair's Commission for Africa called for an emergency programme of training health care workers in Africa. The WHO established its 'Treat, Train and Retain' AIDS and health workforce programme (WHO 2006). This is a long-term effort and results will not be immediate. Three years after Africa's health care worker crisis was signalled to the world, and recognized by WHO and, the situation has scarcely improved. In 2007, MSF provided the following estimates for the ongoing health worker crisis in Africa (table 4.2):

Table 4.2**Continuing shortfall in health workers in Africa, 2007**

Country	No. of doctors per 1000 people	No. of nurses per 1000 people	No. of health care workers per 1000 people
Lesotho	0.05	0.63	0.68
Malawi	0.02	0.56	0.58
Mozambique	0.03	0.20	0.34
South Africa	0.74	3.93	4.68
UK	2.47	9.01	11.47
USA	2.22	11.70	15.52
WHO minimum standard	0.20	1.0	2.28

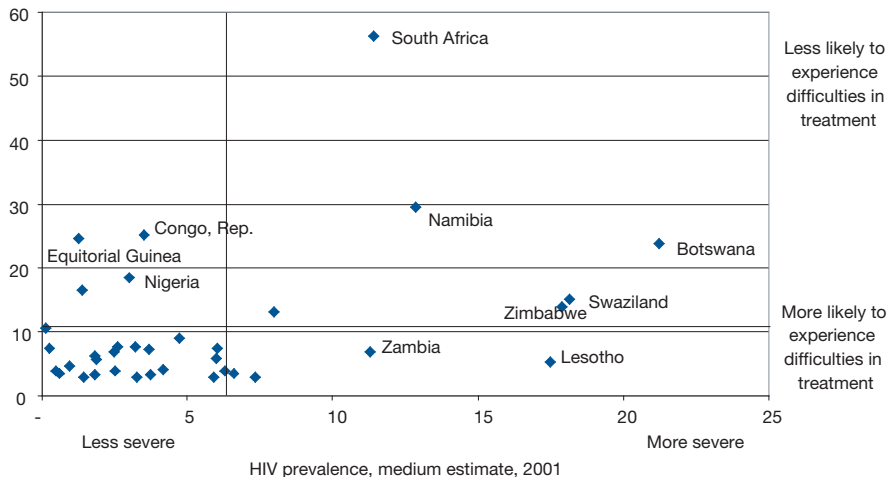
Source: MSF (2007)

Given the diverse situations in sub-Saharan Africa, it seems likely that the scarcity of health professionals will not be felt uniformly across countries. Some may be well endowed with medical staff while facing a low-level epidemic. Others may confront a severe epidemic but also have enough doctors. A few may confront a severe epidemic and have a shortage of medical staff. To distinguish these cases, CHGA classified countries by the ratio of people living with HIV/AIDS divided by the number of doctors—and by the severity of the epidemic.

This approach obviously suffers from some limits. First, not all doctors will be involved in HIV/AIDS treatment and not all HIV-positive patients are affected by AIDS. Second, according to the guidelines developed by WHO, some types of medical personnel will be managing AIDS patients under the guidance of doctors. Thus, the ratio of people living with HIV/AIDS to doctors will likely vary. Despite these qualifications, the perspective is useful. Given the key role of doctors in prescribing drugs, the ratio of people living with HIV/AIDS per doctor provides a good measure of how much the shortage of doctors matters. If a country has more HIV patients per doctor than the norm, it will likely experience human resources constraints.

Without precise methods for estimating human resources requirements for HIV services, this report uses the same assumptions as a recent cost estimate for Ethiopia: that a doctor can see about 430 patients a year (figure 4.6). Somewhat arbitrarily, a benchmark of 5% adult HIV prevalence separates countries with a severe HIV epidemic from those with less severe prevalence.

Figure 4.6
How HIV prevalence rates compare with the availability of physicians



Source: CHGA (From various data)

The good news is that 11 sub-Saharan countries are in a relatively “good” position, facing low prevalence and seeming to have enough doctors (table 4.3). Another six face a more difficult situation. While the number of doctors does not seem to be a binding constraint, the level of the HIV epidemic is high, which could tax the capacity of the health sector. But given their initial situation, there is no reason for them not to avoid future shortages. Five countries face low prevalence and a shortage of doctors, but they should be able to train and retain enough doctors to meet the needs of people living with HIV/AIDS. The last group is the largest, 16 countries facing a severe HIV/AIDS epidemic and a shortage of doctors.

Table 4.3

Countries classified by the severity of the HIV epidemic and the shortage of doctors, 2004

	Doctors not a binding constraint	Shortage of doctors is a binding constraint
Low to moderate HIV	Angola, Benin, Democratic Republic of Congo, Djibouti, Ghana, Gambia, Guinea, Mali, Mauritania, Niger, Senegal	Burkina Faso, Eritrea, Togo, Uganda
Severe HIV epidemic	Congo, Gabon, Kenya, Madagascar, Nigeria, South Africa	Botswana, Burundi, Cameroon, Central Africa Republic, Chad, Côte d'Ivoire, Ethiopia, Lesotho, Liberia, Malawi, Mozambique, Namibia, Swaziland, Rwanda, Tanzania, Zambia, Zimbabwe
Number of countries	17	21

Source: CHGA.

Train new types of health care professional

Inadequate attention to the type and quantity of training contributes to the low number of health professionals. In many countries there has been a bias to train a smaller number of high-cost (exportable) professionals rather than less trained cadres. The burden of managing HIV/AIDS and opportunistic infections makes that bias untenable.

Because training medical staff will take time, AIDS treatment programmes need to make better use of existing personnel. The key measures are to train clinical staff in HIV/AIDS care and develop new models of health care that allow nurses and other mid-level health professionals to provide services previously delivered by doctors (UN Millennium Project 2005). Expanding the role of mid-level medical staff may be the only solution for reaching a large number of people as nurses are often the only medical personnel in primary health clinics. In Zambia laws and health policies were changed to allow nurses and midwives to provide

services previously offered only by doctors. More use should be made of community health workers, community members and people living with HIV/AIDS—groups that test, counsel, distribute medicines and educate community.

In Mozambique, for example, treatment centres set up through Community of Sant’Egidio’s DREAM programme have, at a minimum:

1. One doctor or clinical officer
2. One experienced nurse for clinical monitoring, evaluation of initial tests, decision on patient admission, referral to the doctor of more complicated cases
3. Two nurses to deliver drugs, monitor adherence, and take samples
4. 2–4 community members to welcome patients, compile basic clinical information, deliver nutritional supplements, and provide support for adherence
5. 1 centre coordinator (not necessarily a health professional) (WHO/Sant’Egidio 2005)

Devise strategies to retain health care professionals

Morale among health workers is very low because of poor pay (table 4.4), unattractive career paths (promotion and pay are rarely linked to performance), poor housing and working conditions (including on-the-job safety) and poor supervision. In many countries formal limits on public spending combined with a low priority given to the health sector have exacerbated the problem. In Tanzania the health workforce declined from 67,000 in 1994 to 54,000 in 2002. Careers in health are becoming less attractive as secondary school leavers enter business and commerce for better earnings. In nearly all countries health workers can obtain better opportunities and working conditions if they work for the private health sector. Estimates from Ghana, Zambia and Zimbabwe show losses to other sectors of 15%–40%.

Table 4.4
Average monthly salary for junior doctors (2004 US\$)

Sierra Leone	70
Ghana	205
Zambia	200
Lesotho	1,058
Namibia	1,161
South Africa	1,242

The general response of countries has been to replace staff, but in Malawi the costs are unaffordable, and the necessary funding has not been forthcoming.

Some options: importing more tutors, contracting out training to external bodies, developing self-learning materials and distance learning courses, renting training space, enrolling day students to reduce costs and using existing resources and infrastructure more intensively (table 4.5).

Table 4.5
Approaches to strengthening human resources

Country	Approaches
Cameroon	<ul style="list-style-type: none"> • Introducing incentives and allowances. • Writing specific job descriptions for individual health professionals. • Opening higher-level training schools. • Improving supply of equipment and infrastructures. • Rationally managing human resources for health.
Ghana	<ul style="list-style-type: none"> • Paying additional duty hour's allowance. • Providing car loans. • Bonding staff that proceeds on courses. • Providing opportunities for in-service training through short courses. • Establishing a permanent negotiating team for salaries and other allowances. • Providing fuel allowance for doctors and car maintenance allowance for all health professionals with cars.
Senegal	<ul style="list-style-type: none"> • Providing financial incentives (housing allowances, higher risk and subordination allowances, itinerant allowances, extra work hours allowances and shares of the generated income in the facilities). • Enhancing supervision. • Providing housing loans, free health care for staff and equity for grant awards. • Rationally managing seminars. • Involving stakeholders in the management of health facilities. • Offering special incentives for those in peripheral area.
South Africa	<ul style="list-style-type: none"> • Providing special financial incentives to encourage health professionals to remain in rural areas. • Remunerating work outside the public sector allowed. • Twinning hospitals.
Uganda	<ul style="list-style-type: none"> • Using salary increments to make salaries more competitive. • Increasing opportunities for professional development. • Recruiting more health professionals. • Attracting Ugandan nationals back home.

It was in response to this crisis that the WHO launched its ‘Treat, Train, Retain’ initiative in 2006.

Stop the brain drain

In many African countries the brain drain is the single most important cause of shortages of health professionals. An estimated 20,000 highly qualified Africans emigrate to richer countries each year. Statistics from countries of destination show that more than 23,400 South African health workers (including nearly

9,000 physicians) practice in Australia, Canada, New Zealand, the United Kingdom and the United States, 10% of the health professionals registered in South Africa.

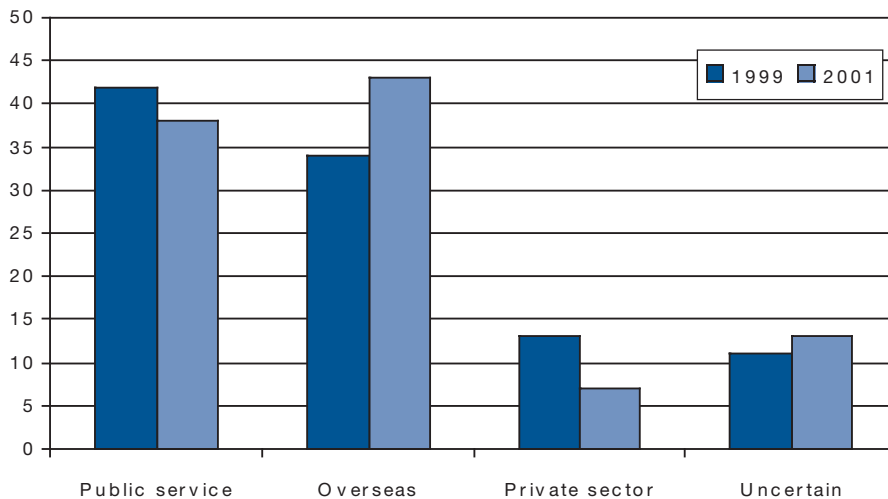
Emigration is continuing if not accelerating (See ECA, *International Migration and Development: Implications for Africa*, 2006) Almost 2,100 South African nurses obtained a U.K. work permit in 2001–02, more than three times the 600 in 1998–99. And a growing percentage of young South African doctors intend to work abroad (figure 4.7). About 50% of Ghana’s medical school graduates are estimated to migrate within 4.5 years and 75% within 9.5 years. In Zimbabwe 1,200 physicians were trained in the 1990s, but only 360 were still practicing in the country in 2001. Zambia retained only 50 of the 600 physicians trained from 1978 to 1999. One reason for the continuing emigration of health care workers is rising demand in western countries.

HIV/AIDS is worsening an already difficult situation, contributing to the loss of health workers in high-prevalence countries. In Malawi and Zambia, deaths of nurses were estimated at almost 40% of the annual output from training. So access to treatment will not be increased in many countries without significant increases in human resources capacity as well as additional training to use the new technologies.

Figure 4.7

More than 40% of young South African doctors intend to work overseas

Intended work location, 1999 and 2001 (%)



Source: Reid 2002.

Health systems must be strengthened

The tasks for governing authorities extend from gaining a fuller understanding of the epidemic—to creating policy and programmatic systems that can offer quality treatment and health care. One of the biggest challenges will be to take a long-term perspective, assessing what can be done years into the future (box 4.5).

Understand the current and future intensity of demand for HIV/AIDS treatment and the capacity of the health system to respond

A more complete understanding of the size and focus of the epidemic and its variable impacts is needed in most countries (see chapters 1 and 2). Rapid assessments of the strengths and weaknesses of the health system, in the light of the HIV/AIDS epidemic and other health needs, will provide a realistic basis for planning.

Use HIV/AIDS as the impetus, but not the only focus, to reform the health care system to deliver treatment for AIDS and other health conditions

With better information, plans can be developed for the multiple dimensions of responding to treatment demands and rebuilding public health and welfare systems to meet the other health needs of people.

Maintain the human resources capacity within the health system and complementary services, such as family welfare, community development and food security

Public health and social welfare programmes have lapsed under various pressures. But the treatment needs of people living with HIV/AIDS, their families and their communities will continue for decades. Governments, businesses and civil society organizations at all levels need to keep their skilled workforces and adapt training to meet new situations that arise.

Oversee implementation from the perspectives of clients and national development

Given the dynamic nature of the HIV/AIDS epidemic and its impacts, governing authorities must regularly review how treatment programmes and public health and social welfare systems are serving people. This will entail regularly gathering appropriate information and responding to gaps and other problems.

Sustain community mobilization through civil society organizations

Communities face some of the greatest consequences of sick and dying members, yet many have responded with their resources and skills. Expanding treatment for AIDS and improving overall health care will require the active involvement of communities. Local and national leaders in all sectors, but especially in civil society, can provide guidance and impetus to communities—and learn from communities—in improving treatment and care.

Maintain budgets to sustain HIV and AIDS treatment and health services for at least 50 years

Realistic budgets for even a two-year cycle can be difficult and contentious. The HIV/AIDS epidemic requires even greater foresight. Mechanisms are needed to assure that financial resources are dedicated and consistently available to HIV/AIDS treatment, prevention and care (see chapter 5).

Box 4.5

What experts say is needed for treatment

A CHGA consultation with more than 100 HIV and AIDS experts in Morocco on HIV and AIDS produced a range of actions for treatment (CHGA 2005b).

- Strengthen and expand prevention, care, treatment support and other services provided directly by communities.
- Take emergency measures to expand the availability of health workers, including treatment supporters.
- Develop and implement national emergency plans to support the training of health care workers for antiretroviral therapy and related care.
- Coordinate investment related to human resource development and training support.

Palliative and community-based care must improve

“For many years to come, the vast majority of people requiring antiretroviral therapy will not receive it—particularly in the rural areas.” CHGA participant (CHGA 2004b)

While universal access to antiretroviral therapy is the goal, resource constraints and full public acceptance of treatment mean the goal will be achieved in incre-

mental stages and over time. Governments also have a responsibility to focus on the needs of people who will not receive antiretroviral therapy. So far, the burden of care has fallen overwhelmingly on family members, especially women. A study in South Africa found that 68% of primary caregivers were female, and in Uganda 86%. It is widely assumed that family support networks can absorb the financial, emotional and practical burden of caring for ill and dying members, but this is not always so (CHGA 2004c). Without community or institutional support, the stresses of caregiving can become overwhelming. Many families have been left significantly poorer as a result of HIV and AIDS, some destitute (CHGA 2004d).

The Southern African Development Community's (SADC) 'HIV/AIDS Strategic Framework and Plan of Action: 2003–2007' provides an approach for national authorities to facilitate a multidimensional response to the epidemic at all levels. Treatment and care are viewed not as standalone programmes, but as part of a wider framework of reducing the incidence of new infections among the most vulnerable groups within SADC and mitigating the socioeconomic impact of HIV and AIDS. The approach stresses the need for policies and legislation relating to HIV prevention, care, support and treatment and for mobilizing and coordinating resources for a multisectoral response to HIV and AIDS.

The discussion here focuses on programmes that provide outside support to the patient and family, including clinical and psychosocial services and material help. Visiting nurses or social workers may provide some services, but community health workers and volunteers are usually the backbone of home care, often organized and managed by nongovernmental organizations, church groups or community organizations. Some governments have also established programmes, sometimes to follow and assist patients after they are discharged from hospitals.

Some of the more promising initiatives to assist people living with HIV and AIDS and families are in communities. Numerous civil society initiatives provide training in home care and support caregivers. As with many such initiatives, they are small and can become overwhelmed by the demand for assistance. Part of the governing task will be to keep local authorities (especially up to district level) in place to assist in coordinating civil society and government assistance programmes.

There is much to be learned from community initiatives to provide food, money, spiritual support, clothing and other forms of care. Community volunteers have taken on some of the burden of caring for very ill family members. Widow support networks have been formed, and community members and volunteers organized by religious groups have assumed care of children orphaned by the death of one or both parents. In some workplaces support groups for people living with HIV and AIDS and for caregivers have been formed, and informal

savings and insurance schemes have reduced some of the financial burden of caregiving. Most of these initiatives are inexpensive and receive little outside support. More financial support could be very helpful. But just as important will be government programmes that complement the strengths and overcome the constraints of community initiatives. Indeed, many community initiatives offer valuable lessons and models for new or expanded programmes worthy of national and donor support.

Because so many organizations, large and small, are offering HIV and AIDS services, learning about their work is best done through district and perhaps even more local forums. Patterns of effectiveness and community involvement, rather than standalone examples, can be identified and shared, offering opportunities for greater harmonization of efforts and sharing of costs. Governing mechanisms offer forums for discussion, problem-solving and innovation, while eschewing conformity to abstract models derived elsewhere.

Long overlooked in treatment campaigns are basic palliative drugs and commodities for people living with HIV and AIDS. Modest pain relief drugs, skin creams, soap powder for washing soiled clothing and bedding, food and other commodities either are not available in local shops or are unaffordable. Improving the supply and use of palliatives and commodities can link families, communities, the health system and the private sector. It can also relieve some of the caregiving burden carried by women.

Another important area warranting special attention is initiatives on HIV and cancer. As more patients live longer under antiretroviral treatment, more of them develop cancers. A recent cohort study in Uganda has drawn attention to this (Mbulaiteye and others 2006), and it should be followed up by appropriate health programmes backed by the necessary funds.

The UN Millennium Project (2005) outlined the essential elements of home-based care, which CHGA participants strongly endorse (box 4.6). Not all families will need all these forms of support, and of course not all programs will be able to meet all needs. An assessment of the most important needs should be the first step in planning a support program.

Box 4.6

Core elements of home care

Comprehensive home care support would include:

- Medical and nursing care, including management of infections, relief of symptoms and palliative care, including oral morphine, at the end of life.
- Referral to clinic- or hospital-based services.
- Training for family caregivers, including education in avoiding infection.
- Basic nursing supplies, such as safe water, gloves and soap.
- Counselling, including HIV prevention counselling, and emotional and spiritual support.
- Help with other household work.
- Food, clothing or other material support.
- Microfinance or help with income-generating projects.

Source: UN Millenium Project 2005.

Working in partnership while not creating parallel structures

In order to rapidly scale up treatment access, under-resourced African health care infrastructures can benefit from working in partnership with civil society actors, the private sector, and associations of people living with HIV/AIDS. In Burkina Faso for example, the government is presently working to scale up access to ART through partnership with civil society actors, particularly associations of people living with HIV. While the treatment itself is mainly provided through public health facilities, the associations play an important part in mobilising people to come forward for voluntary counselling and testing, as well as in providing nutritional and other forms of support for those found to be HIV-positive. This partnership has played an important part in increasing the number of those on ART from 1514 at the end of 2003 to 6630 at the end of September 2005 (Burkina Faso MoH 2005). In Mozambique, the government is working closely with NGOs to boost capacity to deliver treatment. International NGOs, in close partnership with the government, provide human capacity and other resources needed to boost the public health care structures to scale up much-needed HIV testing and treatment.

Participants at CHGA Interactives have stressed the importance of partnerships in order to fast-track ART provision through already hard-pressed African public health infrastructures. However, participants noted, it is important that these

programmes not turn into parallel structures that depend on external support in order to exist and therefore become unsustainable.

Two elements of integration are of particular importance and should be treated as imperative.

One, integrate HIV and AIDS treatment and care with TB programmes.

Tuberculosis and HIV programmes must be closely coordinated and are better implemented if fully integrated. The emergence of extremely drug-resistant TB among populations with a high prevalence of HIV is a very serious threat to public health. There is a need for scaling up and integrating HIV and TB programmes in line with WHO recommendations (WHO, UNAIDS and UNICEF 2007: 51-2).

Two, focus special efforts on children living with HIV and AIDS.

There is a gross neglect of scientific and clinical studies of paediatric AIDS and inadequate development of the specific ART medications appropriate for children, meaning that paediatric treatment remains much more expensive than adult ART.

Conclusion

An Action Plan for provision of Treatment and Care

It is absolutely essential that access to treatment be scaled-up as a key priority in all countries. The WHO estimates that about 4.8 million people in Africa have CD4 count less than 200 and therefore, in terms of its guidelines, require ARV therapy. Between 2004 and 2007, the number on treatment rose from about 100,000 to about 1.3 million, representing 28% of those in need (WHO, UNAIDS and UNICEF 2007). This is a vast improvement but still well short of the goal of universal access. African policymakers can do much better, and those who are affected by HIV and AIDS will hold them accountable if they fall short. However, to do better means identifying the constraints to programme development and service delivery; learning the lessons of how to scale-up access to treatment, and moving forward with an integrated response that is genuinely inclusive of all stakeholders.

The lack of human resources is a key constraint to the provision of anti-retroviral therapy (ART) in Africa. Health services are already operating with shortages of staff and there is virtually no expertise in treating HIV/AIDS in most countries. Human resource requirements for ART provision include people with skills in management, administration, supply management, clinical care and community-based care. A business-as-usual approach, however, to addressing human resource

constraints in ART (through health reforms focusing on the integration of ART services into, e.g. maternal and child health programmes, on decentralization, etc.) will not suffice if large numbers of those in need are to be provided with treatment. The WHO's 'Treat, Train, Retain' initiative is an important effort in this regard which warrants full support.

Faced with the emergency of HIV and AIDS, we urge African governments to re-think existing forms and models of health service delivery not only in the context of ART provision, but in the wider context of declining HR capacity within the health sector in general. This must include: (a) devising new forms of training for key skills and capacities required for ART provision; (b) developing mechanisms to protect existing human resources and human resource capacity in the health sector; (c) and, planning for ART provision within a wider framework of health system human resource development.

We recommend the establishment in each country of an Action Plan for providing Treatment and Care Services. The Plan of Action must aim to ensure access for every family to a motivated, skilled, and supported health worker. When feasible, that worker should be recruited from, accountable to, and supported to work in the community. In devising the Plan of Action, each country must undertake rapid assessments of health care systems to measure the impacts of HIV and AIDS and related conditions on the pattern and level of demand for services and to identify system constraints to scaling up ARVs. Engagement with the WHO's 'Treat, Train, Retain' initiative can assist with the tools for human resource planning.

The Action Plan should be governed by the pre-existing National AIDS Committee and its operational mandate should include: (i) updating treatment guidelines, protocols, and tools for clinical management of HIV and AIDS patients; (ii) developing curricula and pedagogical methods for training medical and paramedical personnel in ARV delivery; and (iii) strengthening the ART delivery system.

Under the Plan of Action, the Committee must assist governments to:

Determine existing and future human resources requirements for an ART programme within the overall health care provision framework. This should take account not only of the losses in human capacity that have already taken place due to HIV/AIDS and other factors, but also future projected attrition.

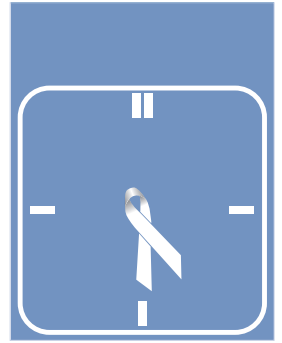
Develop a Human Resource Plan for ART provision and for health more generally that takes account of patterns of demand and supply, within realistic frameworks of what can be afforded, given financial constraints and the losses of training capacity due to HIV and AIDS.

Set up a Human Resources Management Information System to provide information on the different skill sets available and the numbers of health care workers needed.

Integrate Human Resources planning for ART provision into health sector-wide human resource plans, which in turn need to be part of national level multi-sectoral poverty reduction planning processes. ART resources could then be used to address systemic HR problems, such as low pay and retention, and geographical imbalances.

Share aspects of treatment and follow-up with the patients, thus economizing on the time and inputs of health care human resources. This can be done by adopting a patient-centered approach to ART adherence. This approach should be centered on educating patients and empowering them to be actively involved in ART and involves carefully selecting a drug regimen that is easy to take, and setting the health care facilities within easy reach of the patients (at primary health care level).

Provide selective salary adjustments for the highest skilled providers to reduce migration. Given their current limited numbers, the impact on government budget is likely to be relatively small. To keep it small, it may be necessary to create new classifications for health professionals. In addition, use of non-salary incentives could help make public health sector positions more attractive, especially for the rural areas, while avoiding the contagion effects that salary increases for skilled health professionals might have on other health professionals.



5. Financing

the AIDS response

Chapter at a glance

Based on actual scale-up rates for prevention, care, treatment, and orphan support, projected resource needs for an expanded AIDS response total 14.9 billion in 2006, 18.1 billion in 2007, and 22.1 billion in 2008. This money would buy comprehensive coverage of prevention by 2010, antiretroviral treatment to 75% in need of treatment by 2008 and 80% by 2010, significant investment in human resources to support expanded interventions, and support for all double orphans below the poverty line, for all near orphans, and for half of single orphans.

In the past few years global funding for HIV/AIDS has grown 20-fold, a result of initiatives that include the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank's Multi-Country AIDS Program, PEPFAR and the United Kingdom's decision to invest £1.5 billion in global HIV/AIDS interventions from 2004 to 2007. Private foundations have also contributed. The Global Fund had attained its objective of mobilizing substantial funding for HIV/AIDS but it still faces two challenges: how to accelerate the disbursement of funds to countries and how to ensure that its funding can be sustained in the medium term.

The financial flows for the AIDS response have generally been presented as commitments. But what matters for countries are disbursements, the actual funding provided. Bilateral disbursements rose from \$229 million in 1999 to \$1.4 billion by 2004, with most of the increase from the U.S. government. Most of the financing increase has come from high-prevalence countries. Private sector funding from U.S. foundations and international nongovernmental organizations increased from \$10 million in 1997 to an estimated \$250 million in 2004, thanks largely to the Bill and Melinda Gates Foundation.

Even with more funds available, the gap between needs and achievements on the ground is widening, driven by four development gaps—in funding, in disbursement, in allocation and in implementation. Despite a projected increase in commitments, the global HIV/AIDS response remains significantly underfunded. The gap between financial needs and commitments is projected to widen from about \$700 million in 2003 to \$5 billion by 2007. Disbursements are rising much slower than commitments. The estimated gap between commitments and

disbursements, \$2.3 billion in 2004, would reach \$3 billion by 2007. What is being funded may not be what is needed. And implementation is moving slowly, evident in the low coverage of interventions in Africa. Overall, the gap is widening between resources and implementation.

Profound changes are needed in the way donor support is mobilized and provided. What donors finance must be improved. Aid must be flexible. Donor programs must be coordinated at the country level. And coordination among donors must be strengthened. Increased financial support—especially flexible budgetary support—is unlikely to materialize unless governance and public expenditure management are sound and countries document the results achieved through the mobilization of external aid.

Introduction

The global community agrees on the need to respond aggressively to the global AIDS pandemic—to prevent new infections, save lives and secure the future development of countries, particularly in Africa. Among the mechanisms for funding the AIDS response are the Global Fund to Fight AIDS, Tuberculosis and Malaria (box 5.1), the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) and the World Bank’s Multi-Country HIV/AIDS Program. African governments and such private foundations as the Bill and Melinda Gates Foundation and the Bill Clinton Foundation have raised their contributions substantially. As a result, the resources for implementing the global AIDS response have grown—from \$1.1 billion in 1999 to close to \$10 billion in 2007. Even while one-third of these amounts comes from low- and middle-income countries themselves (e.g. government and out-of-pocket expenditures), fully two-thirds are from international flows.

The greater funding should augur well for sustained increases in resource availability for HIV and AIDS programming. But much more needs to be done, particularly at the country level. While the new funds made it possible to contemplate far more ambitious programmes than were possible in the recent past, the aim of universal access by 2010 demands an even greater commitment of resources. The gap between resource needs for achieving this target and resource availability rose from \$2.8 billion in 2005 to \$8.1 billion in 2007, even while funding flows increased overall. Meanwhile, much more needs to be committed to ease what one CHGA participant called “the implementation gap,” the apparent inability of countries to use the available resources effectively (CHGA and ILO 2004). The result is that substantial bottlenecks remain in ensuring that the available funding is reaching those in greatest need. Substantial efficiencies in health care provision can be made by attending to what Dr. Jim Kim has called “the science of implementation.” (Joint Learning Initiative on Children and AIDS 2007)

This chapter is concerned with, first, estimating the financial costs of a sufficient response to HIV and AIDS in Africa, and second, the governance challenges of ensuring that these funds can be spent in an efficient and effective manner to ensure that public health goals are met and the response is sustainable. Those governance issues include questions of absorption capacity, structural and functional bottlenecks, and prioritization among competing goals. CHGA’s work highlights gaps between needs and commitments, between commitments and funding,

between funding and disbursement and between disbursement and implementation. These four gaps hamper the ability of African states to bring the HIV and AIDS epidemic under control. The chapter concludes with some policy options for strengthening the AIDS response.



“How do we know how much money will be required to mount an effective and sustained fight against HIV/AIDS in Africa?”

*Participants,
CHGA Interactive:
Morocco.*



What's needed

There has been a substantial evolution in the definition of what constitutes a comprehensive AIDS response, and the selection of interventions has typically been based on the policies of global agencies such as the World Health Organization (CHGA 2005b). The first estimate, in 1996, costed the resource requirements for prevention (Broomberg, Soderlund and Mills 1996). This was consistent with the prevailing view that the AIDS response should consist only of prevention, information and education. But as the epidemic became more “mature,” with more people needing urgent treatment (see chapter 4), the range of interventions steadily expanded. Estimates of the cost of scaling up interventions, including care and treatment, were calculated first for sub-Saharan Africa (World Bank 2001) and later for all low- and middle-income countries.

In the last seven years, UNAIDS has conducted five major exercises to estimate the resource requirements for a comprehensive response to the epidemic. The first was inspired in April 2001 by the Secretary-General's call in Abuja for a war chest of \$7–\$10 billion to fight AIDS, tuberculosis and malaria. Prepared for the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) in June 2001, this exercise estimated the cost of HIV prevention and AIDS care needs in 135 low- and middle-income countries (UNGASS 2001). To reach the UNGASS goals for 2005, annual spending would need to reach \$9.2 billion by that year (Schwartländer and others 2001). After the 2002 Barcelona conference, an updated calculation of resource needs was conducted for the UNAIDS Programme Coordinating Board in November 2002 (UNAIDS 2002a), given the acknowledgement that many countries would not attain the UNGASS goals by 2005. Attaining a comprehensive coverage by 2007 was estimated to require an increase in resources from \$10.5 billion in 2005 to \$15.2 billion by 2007 (UNAIDS 2002a).

Between 2002 and 2004 an extensive consultation led to refinement of estimates of population groups, possible coverage levels and more realistic unit costs of services. The third estimate, published in 2004, took into account the WHO “3 by 5” initiative, which implied a rapid scaling-up of treatment and care. Treatment costs for opportunistic illnesses rose, as did those for voluntary counselling and testing, needed for detecting enough people to meet the 3 by 5 goals. The

financial requirements for a comprehensive response to AIDS rose to \$11.6 billion for 2005 (UNAIDS 2004), \$15.4 billion for 2010 and \$22.5 billion in 2015 (UNAIDS 2007).

The fourth set of estimates (June 2005) used information on actual scale-up rates for prevention, care, treatment and orphan support—from various progress reports, especially for the WHO “3 by 5,” the GFATM and national AIDS account information. Estimates were calculated for 2006–08, but unlike previous estimates, they took into account the cost of additional investments in health infrastructure and health personnel required for scaling up.

The most recent global resource needs estimates for 2009–2015 were published by UNAIDS in September 2007. These differed from the previous estimates in several respects. Several new programmatic interventions were included. Under prevention, these were selected services to reduce violence against women, male circumcision, and opioid substitution treatment for injecting drug users. Under treatment, there were provider-initiated testing and counseling and—most significantly—a modification of the definition of persons in need of ART to start treatment one year earlier than had previously been considered appropriate. Programme support costs were also expanded to include global advocacy, policy development and technical support. Lastly, two scenarios were presented—one for achieving universal access by 2010 (figures presented in table 5.1) and the second for phased scale-up towards achieving universal access by 2015 (the figures presented in table 5.2).

Table 5.1

Resource needs for achieving universal access by 2010 (US\$ billions)

	2009	2010	2015
Prevention	11.4	15.1	15.4
Treatment and care	10.8	15.4	22.7
Support for orphans and vulnerable children	2.4	4.4	4.5
Programme costs	5.0	6.1	10.1
Preventing violence against women	0.6	1.3	1.3
Total	30.2	42.2	54.0

Source: UNAIDS 2007.

Scaling up clinical services will require 457,000 full time equivalents of health personnel, including 18,000 physicians, 111,000 nurses and about the same number of laboratory technicians. In addition, 1.5 million teachers will need

to be trained. These are global figures, but Africa's demands are commensurate with the size of its epidemics. We should note also that the costs for the orphans and vulnerable children component in Africa includes support not just to those affected by AIDS, but all orphans and vulnerable children.

Table 5.2

Resource needs for phased scale up to achieve universal access by 2015 (US\$ billions)

	2009	2010	2015
Prevention	9.2	11.9	15.4
Treatment and care	7.4	9.2	19.3
Support for orphans and vulnerable children	1.8	2.5	4.5
Programme costs	3.6	4.4	8.9
Preventing violence against women	0.2	0.4	1.3
Total	22.2	28.4	49.5

Source: UNAIDS 2007.

What would this money buy? Under the accelerated achievement of universal access by 2010, it would be nothing short of a comprehensive transformation of global HIV and AIDS programming.

- Comprehensive coverage of prevention by 2010. In generalized epidemics the financial resources would allow for interventions to fully cover the various target groups. For low-level and concentrated epidemics, different coverage targets would be needed to take into account different priorities.¹
- Antiretroviral treatment to 75% in need of treatment by 2008 and 80% by 2010.² The number of people on antiretroviral treatment would increase from 3 million in 2006 to 6.6 million in 2008 and 9.8 million in 2010.
- Expanded interventions require significant investments in human resources. The cost of training medical students and nurses was included for low-income countries and two middle-income countries—Botswana and South Africa. Additional staff recruitment and improved wage benefits were also taken into account.

1 For more detail on coverage, see UNAIDS (2005). Resource Needs for an Expanded Response to AIDS in Low and Middle Income Countries. Presented at the Programme Coordinating Board, seventieth meeting, 27-29 June 2005.

2 The 80% coverage level corresponds to an accepted interpretation of what constitutes “universal access”. Even in high income countries with universal access to treatment, coverage remains less than 80 percent of those in need of treatment.

- In Africa resources would provide support to all double orphans below the poverty line (children who have lost both parents), all near orphans (children who will be orphans within one year) and half of single orphans (those who have lost one parent).³ Outside Africa, support would be limited to AIDS orphans (on the assumption that other orphans would be supported by other programmes).
- *Programme costs would be financed.* Defined as expenditures incurred outside the point of health care delivery, these costs include managing AIDS programmes, setting up monitoring and evaluation systems, improving logistics and supply and upgrading laboratories.

The 2007 estimates are a substantial improvement over previous ones, particularly the explicit costing of investments to alleviate country capacity constraints. They also address an apparent paradox. In many countries, especially those with high prevalence, the cost of the AIDS response was initially estimated to be small (or at least much smaller than recent estimates), yet those countries have large numbers of people living with HIV and AIDS. A key reason was that the pre-2005 methodologies did not cost building health systems for scaling up interventions. Once these investments are included, the cost of addressing the HIV and AIDS epidemic becomes extraordinarily large.⁴

The methodology still suffers from shortcomings. So far, all the estimates of resource requirements have assumed that the key factor determining the feasible scaling up of interventions is the lack of access to services not the lack of demand by households. Yet in many countries the use of government hospitals and health facilities has remained consistently low, a strong indication of a mismatch between the household demand for services and the government supply of services. Under such circumstances building new facilities would not achieve much without addressing the management of health systems.

Over the long term the capacity of African countries to implement a comprehensive HIV and AIDS response would increase, allowing interventions to reach a high percentage of the target groups. Access to prevention information would be universal. All orphans would receive care and support. And 80% of those needing antiretroviral therapy would have access to treatment.

So far, the estimated costs have assumed that antiretroviral treatment would extend lives by about three years, since most people start treatment when they are already at an extremely advanced stage of AIDS, reducing the therapy's effective-

3 It is difficult and inappropriate to target only children orphaned by AIDS for support. It was therefore decided that the cost of support to all orphans living below the poverty line in sub-Saharan Africa should be included. Outside this region, only the cost of supporting children orphaned by AIDS was included.

4 This result also explains why many African countries were reluctant to provide a comprehensive set of interventions as doing so would have exceeded the resources of the government budget.

ness. But in time people will likely change their behaviour and initiate antiretroviral therapy earlier, increasing their life expectancies much more than currently assumed. The number of people on antiretroviral treatment would then increase substantially, to 9 million by 2015 not 6 million (Salomon and others 2004). However, data on which to construct such models and empirical evidence for the point of therapy initiation remain scarce and inconclusive. Modelling exercises indicate that the total cost of ART varies substantially in line with its effectiveness at increasing life expectancy.

Table 5.3

Estimated costs of long-term AIDS response in sub-Saharan Africa

Costs	AIDS response, 2008	AIDS response, 2015	Impact of longer life expectancy with antiretroviral therapy, 2015
Prevention ^a	\$3.2 billion	\$3.8 billion	\$3.8 billion
Care and treatment ^b	\$2.9 billion	\$6.2 billion	\$9.4 billion
Numbers of people on antiretroviral therapy ^b	2.5 million	6 million	9 million
Additional life expectancy	3 years	3 years	10 years
Orphans and vulnerable children ^c	\$2.6 billion	\$3.3 billion	\$3.3 billion
Programmes and investment in human resources ^d	\$1.3 billion	\$2.0 billion	\$2.5 billion
Total	\$10 billion	\$15.3 billion	\$19.0 billion

a. Assumed to increase in line with population growth (2.3% a year).

b. Assumed to increase in proportion to the number of patients with access to antiretroviral therapy.

c. Uses \$220 per AIDS orphan, projected to number 15 million by 2015.

d. Assumed to be 15% of total costs.

Source: CHGA.

What's committed

In the past few years international funding for HIV and AIDS has grown 20-fold, a result of initiatives that include the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank's Multi-Country AIDS Program, PEPFAR and the United Kingdom's decision to invest £1.5 billion in global HIV/AIDS interventions from 2004 to 2007. Private foundations have also contributed. Domestic spending has also risen markedly.

As a result of the call for action from the then UN Secretary General, Mr. Kofi Annan, made loud and clear at the December 2000 African Development Forum, "Leadership at all levels to overcome HIV and AIDS," the Global Fund to Fight

Aids, Tuberculosis and Malaria was established in January 2002 as a private foundation to help finance the battle against the three diseases. A novel instrument for rapidly disbursing grants to governments and nongovernmental organizations, the fund does not implement or design programmes—it is a financing mechanism only. It receives funding proposals through the country coordinating mechanism that brings together donors, civil society and government. These mechanisms were created to give civil society a big say in project selection. The Global Fund approved the first round of grants in April 2002, and has continued regularly, disbursing \$4.8 billion out of \$9.8 billion grants approved by October 2007 (GFATM 2007). An eighth round of grants is due to be launched in March 2008. In addition, the grants approved in the previous rounds will also have to be renewed (box 5.1).

CHGA participants acknowledged that the Global Fund had attained its objective of mobilizing substantial funding for HIV/AIDS but that it still faces two challenges: how to accelerate the disbursement of funds to countries (see below) and how to ensure that its funding can be sustained in the medium term (CHGA 2005b).

PEPFAR was launched in January 2003. Some \$15 billion was pledged for fiscal 2004–08 to scale up prevention, care and treatment in 15 countries (12 in Africa). The programme aims to prevent 7 million new infections worldwide, provide antiretroviral drugs for 2 million infected people and provide care for 10 million infected people, including orphans. Like the Global Fund, the plan is a new mechanism for disbursing funds, requiring specific channels particularly for distributing antiretroviral drugs. While CHGA participants supported the initiative, they expressed concerns about its being too unilateral, arguing that it would have “been preferable for the United States government to act in closer cooperation with other existing mechanisms, for example by channelling most funds through the Global Fund” (CHGA 2005b). Many also questioned whether the plan will strengthen African health care systems enough to enable them to deal with the AIDS epidemic over the long term (CHGA 2004).

What's disbursed

“We hear in the news everyday that new money is being made available to fight AIDS in Africa. But where is the money? At the country level we are not seeing much of it.” Participant, CHGA Interactive: Morocco

The financial flows for the AIDS response have generally been presented as commitments. But what matters for countries are disbursements, the actual funding provided. The overall disbursement is grouped by bilateral and multilateral donors, domestic spending and private spending (figure 5.1).



“More money than ever is on the table, but its promise remains to be realized. Across the continent there are still too few countries that have been able to either reverse the spread of the epidemic or stop its progression, and few programmes have been scaled up to a national level.” Participant, CHGA Interactive:

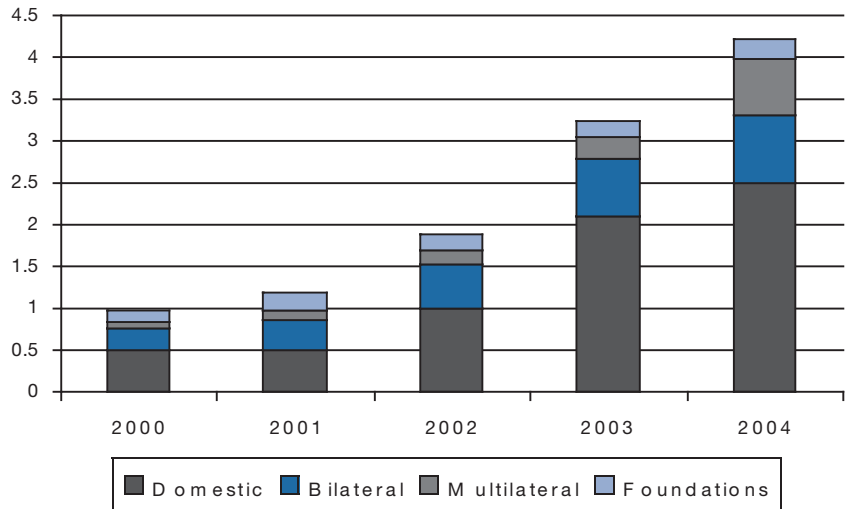
Morocco.



Figure 5.1

Bilateral and multilateral sources are providing a growing share of AIDS disbursements

AIDS disbursements, 2000–04 (\$ billions)



Source: CHGA

Note: In the absence of a comprehensive database on disbursements, CHGA has used different data sources to calculate the current level of disbursement of AIDS funds in Africa. For 2002 and 2003, estimates of disbursements were obtained from the OECD DAC statistic (2005). In the case of the World Bank and the Global Fund, estimates were computed from the respective databases. As previously mentioned, domestic spending estimates were obtained from UNAIDS publication. In the absence of data, spending by U.S. foundations and UN agencies were assumed to be equal to commitments.

Box 5.1

The Global Fund to Fight AIDS, Tuberculosis and Malaria

Since its inception in January 2002 the Global Fund to Fight AIDS, Tuberculosis and Malaria has become a major instrument for funding the response to HIV/AIDS. The fund has signed grant agreements worth \$5.97 billion and disbursed \$3.73 billion (June 2007). About 54% of the grants are for HIV/AIDS, and \$1.9 billion worth of projects have been approved for Africa. Impressive as this may seem, it is only a moderate contribution to the total global needs.

The Global Fund faces the challenge of annual funding with no guarantee of sustained funding—although programmes are predicated on continuing support. The Global Fund board typically approves a budget ceiling for two years (known as phase 1). At the end of this period, the Global Fund decides whether to extend the grant for another three years (phase 2).

Here is the situation as of October 2007:

All amounts in US\$m

	Approved Proposals		Grant Agreements		Disbursements	
	Ph 1	Ph 2	Ph 1	Ph 2	Ph 1	Ph 2
Round 1	576	839	576	737	544	480
Round 2	852	964	852	916	813	493
Round 3	653	771	635	629	599	238
Round 4	1,015	1,624	1,014	1,052	907	238
Round 5	777	18	777	0	474	0
Round 6	874	0	869	0	269	0
Round 7	1,120	0	0	0	0	0
Total	5,849	4,216	0	0	0	0

	Approved Proposals		Grant Agreements		Disbursements	
	Ph 1	Ph 2	Ph 1	Ph 2	Ph 1	Ph 2
Middle East & N. Africa	485	167	316	158	234	47
Southern Africa	903	900	748	570	536	254
East Africa	1,529	1,222	1,144	803	969	339
West & Cent. Africa	867	338	733	314	523	123

A major challenge is the significant gap between what donors pledge and what they actually pay. By October 2007 donors had pledged \$18 billion but paid only about \$9 billion.

Source: GFATM 2007.

Bilateral and multilateral disbursements. Bilateral disbursements rose from \$229 million in 1999 to \$1.4 billion by 2004, with most of the increase from the U.S. government. Disbursements from multilateral organizations remained relatively small until 2003. Among multilateral agencies, funding from the Global Fund started to have a noticeable impact only in 2004, with disbursements of \$400 million, revealing the delay between commitments and disbursements. The Global Fund's design made it possible to mobilize additional funding quickly and to channel these funds to countries. But because it is not an implementing agency, the extent to which grants are actually spent at the country level depends on technical support by other institutions.

For round 1, approved in January 2003, only 75% of the funds were disbursed by July 2005. Disbursement by the Global Fund means only disbursement to the principal agent. Funds then have to be transferred to other recipients and spent to be counted as disbursements under the Organisation for Economic Co-operation and Development (OECD) definition for international aid.

Table 5.4
Estimated AIDS disbursements by source, 1999–2004 (\$ billions)

	1999	2000	2001	2002	2003	2004
Bilateral donors and European Communitya	229	403	470	673	839	1,449
World Bankb	70	70	120	161	176	270
Global Fundc	n/a	n/a	n/a	n/a	90	400
Foundations and nongovernmental organizations	87	136	200	200	200	250
Domestic spending (local governments and households)d	500	500	500	1,000	2,000	2,000
Total	859	1,043	1,266	2,011	3,179	3,885

Note: n/a = not applicable

a. The 2000–03 disbursement data were obtained from the OECD DAC statistics 2005. To avoid double counting, the disbursements of countries to the Global Fund were excluded from bilateral funding as they are reflected in the disbursements of the Global Fund (2005a). Spending on HIV research was also excluded from the data to ensure comparability with the estimated cost of the HIV/AIDS response. Disbursements for 2004 were derived from the U.S. budget 2004, the World Bank OECD DAC Statistics Database and the Global Fund (2005a). Disbursements of other countries were projected based on past trends. In the case of affected countries the only available data are from the few AIDS national accounts that have been estimated, which provide estimates of disbursements. Data for 1999 and 2004 were obtained from government budgets and the Kaiser Family Foundation (2005).

b. World Bank projects database 2005. Includes HIV projects and the HIV components of health projects.

c. GFATM 2005a.

Domestic spending. Data indicate that most of the financing increase has come from high-prevalence countries. In Latin America private out-of-pocket payments rose from 10%–11% of total domestic spending to 20%–25%, reflecting the epidemic's spread. Using data from national AIDS accounts, CHGA can con-

firm a similar trend in Africa. The overall share borne by households varies from 9% (Ghana) to 26% (Kenya).

Most of the spending is for drugs, often purchased from private pharmacies. The cost would be much lower if drugs were purchased in bulk at the reduced prices now available and distributed widely through health clinics. Doing this will require greater disbursements from bilateral and multilateral donors.

Private sector. Private sector funding from U.S. foundations and international nongovernmental organizations increased from \$10 million in 1997 to an estimated \$250 million in 2004, thanks largely to the Bill and Melinda Gates Foundation. Spending by international nongovernmental organizations, fluctuating in recent years, was an estimated \$119 million in 2002 (UNAIDS 2004).

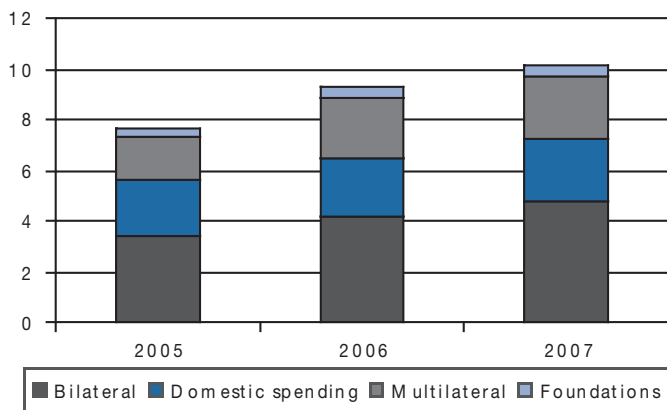
Four development gaps

More funding has become available for HIV and AIDS than ever before. But even with more funds available, the gap between needs and achievements on the ground is widening, driven by four development gaps—in funding, in disbursement, in allocation and in implementation.

Figure 5.2

Projected Global AIDS commitments are expected to grow thanks mostly to increases in aid from bilateral sources (PEPFAR) and the GF

Projected AIDS commitments (\$ billions)

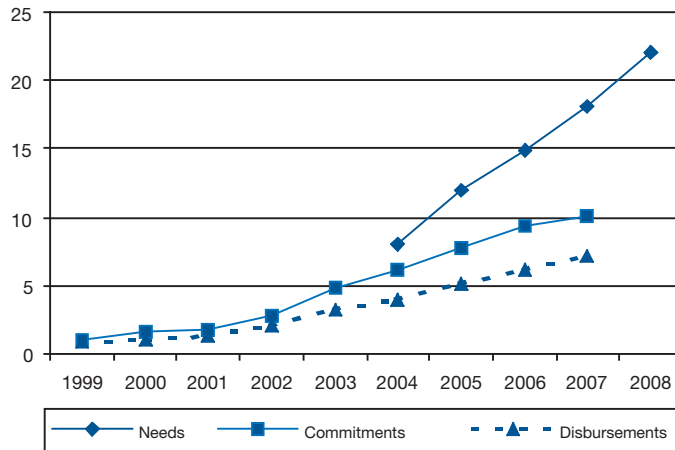


Source: UNAIDS 2005.

Figure 5.3.

Gaps are expected to widen between needs and commitments and disbursements

Current and projected needs, commitments and disbursements (\$ billions)



Source: CHGA 2005b.

Funding gap

Despite a projected increase in commitments, the global HIV/AIDS response remains significantly underfunded. The gap between financial needs and commitments is projected to widen from about \$2.6 billion in 2005 to \$8.1 billion by 2010.⁵ It would widen even more with a full package of prevention interventions, treatment and mitigation efforts. The evidence shows that donor aid inflows (both in general and for HIV and AIDS) are much more volatile than domestic revenues (Bulír and Hamann 2003), a source of concern because bilateral commitments, 57% of the bilateral and multilateral AIDS response, are short term. For seven African countries donor commitments vary substantially (figure 5.4), possibly pushing countries into expansions in service delivery followed by disruptions. Ministries of finance have thus been reluctant to take long-term decisions—hiring more medical personnel, increasing the number of people on treatment.

5 Commitments are based on US budgetary data, Global Fund data base, and World Bank future projects. These constitute the largest share of the increase. Other commitments were projected to increase in line with recent trends.

Disbursement gap

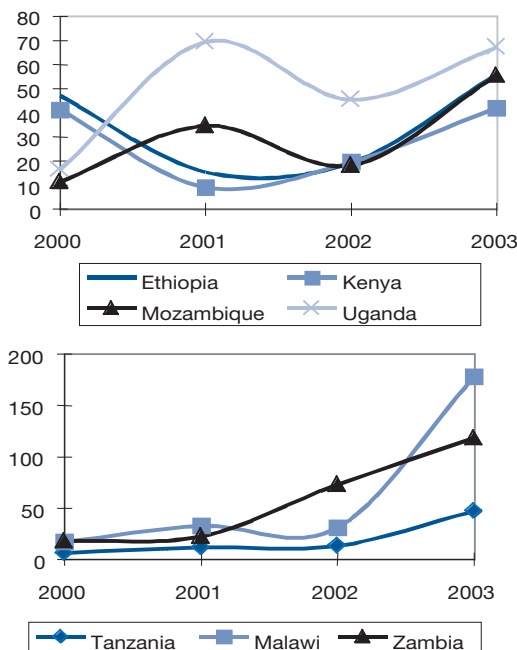
Disbursements are rising much slower than commitments (see figure 5.3).⁶ Because of the unavoidable lag between the commitment of funds and actual disbursement, disbursements are usually less than commitments. What distinguishes the current situation is the much faster buildup of commitments. The estimated gap between commitments and disbursements, \$2.3 billion in 2004, reached \$3 billion by 2007. The cumulative difference was around \$14 billion by 2007—nearly 80% of the funding needs for the AIDS response in that year.

To understand this paradox, consider the 12 African countries selected under PEPFAR. Annual commitments from bilateral and multilateral donors were about \$400 million in 2000–02, but then rose to about \$1.4 billion in 2004, creating difficulties for countries, especially for disbursements (figure 5.5).

Figure 5.4

Donor commitments vary substantially by country

Donor commitments for HIV/AIDS as a share of public health expenditures, 2000–03 (%)



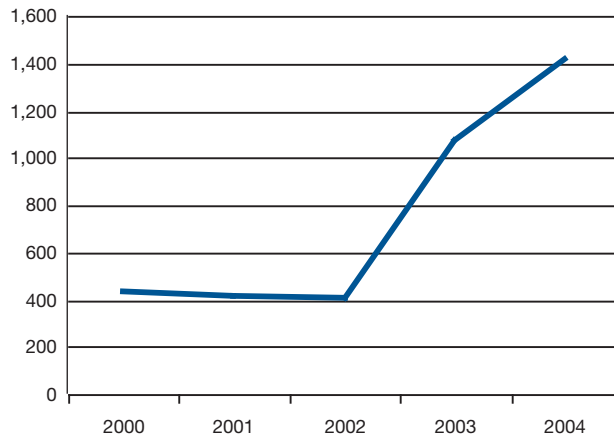
Source: World Bank World Development Indicators 2005 and World Bank OECD–DAC database 2005.

⁶ It should be kept in mind that such figures are preliminary due to the unavoidable uncertainty in projecting future disbursements. Historical data was obtained from various sources, including the OECD data base for 2002 and 2003. Other years were projected on the basis of disbursement profiles which were estimated for various donors.

Figure 5.5

Stagnant for several years, HIV/AIDS bilateral and multilateral commitments for 12 African countries have been growing in recent years

HIV/AIDS bilateral and multilateral commitments (\$ millions)



Note: The countries are Botswana, Côte d'Ivoire, Ethiopia, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda and Zambia.

Source: Commitment data are from OECD database for 2000–03 and from Global Fund, PEPFAR and World Bank for 2004.

The available information suggests that disbursements are proceeding at a slow pace, certainly much slower than expected. For example, of \$1.1 billion committed to sub-Saharan Africa for HIV/AIDS by the Global Fund, only \$480 million was disbursed by August 2005. This situation goes beyond the Global Fund. Mozambique could not use the PEPFAR funds it received in 2004. Kenya could not disburse donor funds. Uganda initially turned down Global Fund grants in 2003, arguing that they would have been inconsistent with its macroeconomic policy.

Allocation gap

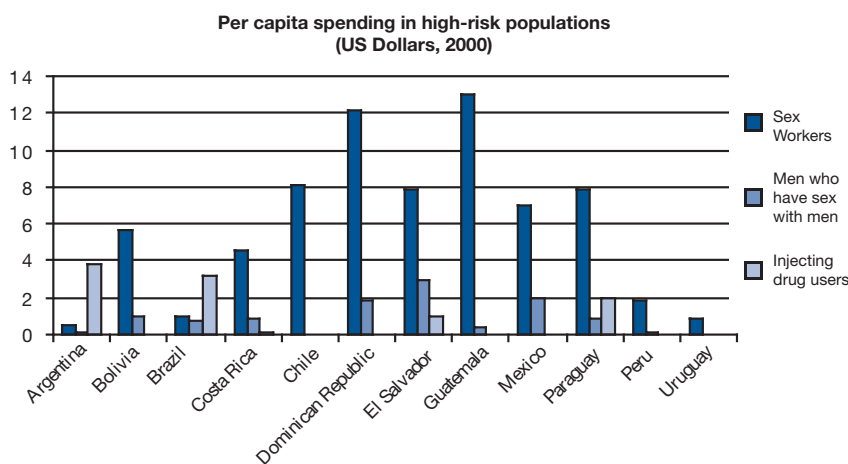
What is being funded may not be what is needed. CHGA (2005b) estimates of national AIDS accounts for Burkina Faso and Ghana show that, in many instances, allocations did not address the target groups. And groups that account for most of the HIV prevalence received at best 10% of the funding.

In other parts of Africa the allocation of funds may be much less of a problem. In southern Africa the epidemiological evidence suggests that most new infections come from the general population, implying that the current allocation of resources may be much more appropriate to the challenges of tackling that

particular epidemic. In any case, a much stronger link is required between the analysis of the HIV epidemic and the allocation of resources.

Similar allocations are found in most of Latin America, where countries direct the bulk of their spending to sex worker outreach programmes, neglecting the fact that men having sex with men and injecting drug users are driving the epidemic throughout the region. Only Argentina and Brazil appear to have prioritized their expenditures towards injecting drug use (figure 5.7).

Figure 5.7
Spending in Latin America is generally focused on sex workers



Source: SIDALAC database of national AIDS accounts 2005.

Implementation gap

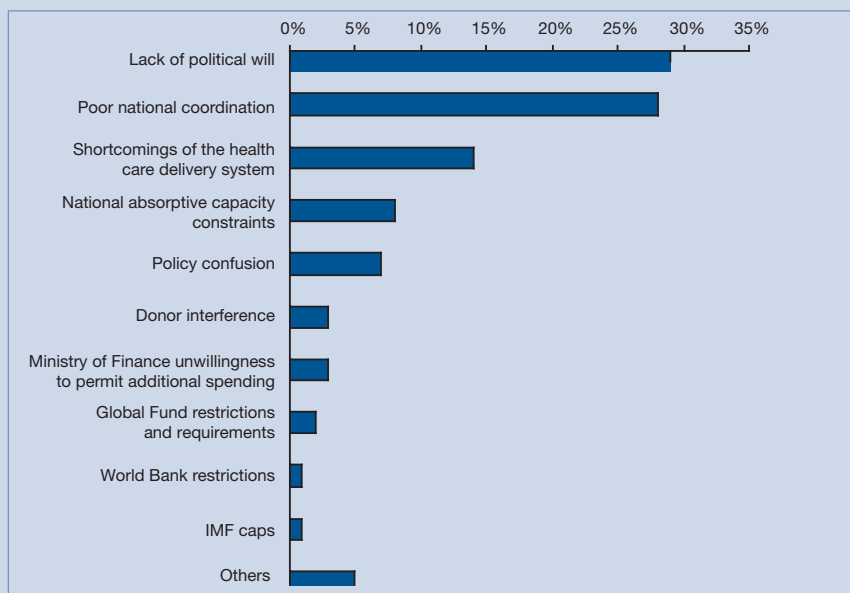
Implementation is moving slowly, evident in the low coverage of interventions in Africa. Overall, the gap is widening between resources and implementation. A basic question is whether sub-Saharan African countries can “absorb” much higher levels of international aid in their fight against the epidemic. Some argue that the targets are overly ambitious, that attaining them would require massive investments to strengthen the health sector. Others respond that countries could absorb the additional resources if they were not prevented by overly conservative IMF macroeconomic policies (box 5.2).

Box 5.2

Where is the implementation problem?

What are the main factors explaining why funds available are not spent? The Center for Global Development and the International AIDS Economics Network (IAEN) conducted a survey of perceptions of bottlenecks preventing the disbursement of AIDS funds. The survey was emailed to subscribers of the IAEN email updates. Some 353 responses were received (one third each from Africa, Europe and North America). Overall:

- Respondents did not consider macroeconomic policies to be as important a constraint as such other factors as lack of political will, poor national coordination and shortcomings of the national health delivery system.
- Views were similar in Africa and elsewhere.



Source: Center for Global Development (CGD) and International AIDS Economics Network (IAEN) 2005.

Absorptive capacity is not a problem

The widening gap between resources and country implementation was noticed by many CHGA participants. Two facts are important in the discussion of this gap: the risk of inflation and the risk of real exchange rate appreciation. First, large inflows of external aid are likely to stimulate inflation if they are spent mainly on domestic goods and services. In some cases, however, the monetary consequences can be offset through sterilization policies: if external aid is used to finance imports, there are no inflationary consequences. Second, large and

sudden influxes of financial aid can often cause real exchange rate appreciation, either through appreciation of the nominal exchange rate (for a floating rate) or through inflation (for a fixed exchange rate). Real exchange rate appreciation can be particularly harmful for African countries because of its adverse impact on agricultural exports and small-scale farmers.

Whether these effects matter is an empirical question that can be addressed only through country analysis. For Angola, the gains from financial assistance greatly exceed the small pains of exchange rate appreciation (Nkuzu 2005). A key consideration is likely to be the sequencing of investments and expenditures, recently analyzed in the context of a general equilibrium model (Sundberg 2005).

Given the potentially damaging effects of large, short-term variations in foreign exchange inflows, the IMF's usual policy prescription has been to keep monetary expansion from causing excessive inflation. In most countries the main policy tool for this is fiscal policy. By controlling budgetary expenditures or raising taxes, the government can reduce the recourse to monetary financing for financing the fiscal deficit, lowering the expansion of the money supply and inflation. Given its focus on controlling inflation, the IMF has been accused of imposing undue ceilings on spending. Do such ceilings prevent countries from using AIDS assistance from donors? This question is reflected in the oft-quoted statement that some 40,000 Tanzanian nurses cannot be hired by the government because of IMF ceilings on public spending. Yet, the IMF has consistently denied that it imposes ceilings on the external funding of government programs, especially when such programs are financed by grants (box 5.3).

An alternative explanation for the slow disbursement of funds is the limited "absorptive" capacity of most sub-Saharan countries. Absorptive capacity can have various meanings, but for this analysis, it is defined as a shortage of skilled health professionals that prevents countries from expanding care and treatment as hoped. Indeed, of 12 focus countries in the PEPFAR initiative, 9 had a severe shortage of physicians, precisely the ones receiving large amounts of donor financing.

Box 5.3

Macroeconomic programmes and the AIDS response

Zambia

To assist in the fight against HIV/AIDS, the international community is providing Zambia with resources through the World Bank's Multi-Country AIDS Program, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the U.S. government's PEPFAR and other bilateral donor programmes. By August 2005 grants amounting to \$118 million had been approved by the Global Fund while under PEPFAR the country was scheduled to receive \$82 million in fiscal 2004 and \$115 million in fiscal 2005. The difficulties in using these funds quickly are not the direct result of the IMF macroeconomic program because there is no direct or indirect link to spending or hiring under IMF programmes. But external sources of financing for HIV/AIDS typically cannot be used to finance additional staff, who might help Zambia scale up its AIDS response.

Kenya

The fiscal programme underpinning the IMF Poverty Reduction Growth Facility reflects the country's poverty reduction strategies, including actions to increase the number of patients on antiretroviral treatment. Funds committed by PEPFAR amounted to \$93 million for fiscal 2004 and \$136 million for fiscal 2005. In addition, the Global Fund provided grants of \$40 million. Disbursements are expected to average \$32 million a year in 2005 and 2006. The IMF programme limits the size of the core civil service establishment, but teaching, health and security services are excluded. It has been agreed that these services may hire additional personnel to fill the 3,000 positions lost by the core civil service through attrition.

Uganda

Since 1997/98, the health budget has increased from 1.8% of GDP to 2.6%. Additional resources are available to Uganda through the Global Fund (\$119 million has been approved) and PEPFAR (\$82 million for fiscal 2004 and \$115 million for fiscal 2005, with only \$32 million disbursed).

The absorptive constraint can also be assessed by focusing on the ratio of AIDS commitments to total health expenditures (allowing for the fact that some AIDS spending is not health spending). To a large extent, health spending mirrors the human resources constraint because in most sub-Saharan countries, around 70% of the government health budget is for salaries. One would therefore expect countries with a shortage of health professionals to have a small health budget. So, the ratio of donor commitments to health expenditures should be larger in countries with a shortage of health professionals (table 5.5). For the countries with shortages of doctors, the ratio of aid commitments to health expenditures ranges from 47% (Tanzania) to 118% (Zambia) with three exceptions: Botswana, Namibia and Côte d'Ivoire. Botswana is unusual because it has substantial diamond revenues, which reduce its dependence on external aid. Namibia's situation resem-

bles Botswana's because it is not a low-income country. For Côte d'Ivoire political developments explain much of the low inflow of AIDS money.

Table 5.5

Slow disbursement of donor AIDS response and shortage of doctors

	Shortage of physicians a binding constraint?	Bilateral and multilateral commitments for AIDS as a share of government health expenditures, 2003 (%)
Botswana	Yes	14.8
Côte d'Ivoire	Yes	16.7
Ethiopia	Yes	55.7
Mozambique	Yes	55.3
Namibia	Yes	12.1
Rwanda	Yes	115.1
Tanzania	Yes	46.9
Uganda	Yes	66.9
Zambia	Yes	118.1
Kenya	No	41.9
Nigeria	No	18.1
South Africa	No	3.7

Source: World Bank OECD–DAC database 2005; World Bank World Development Indicators 2005.

Note: The shortage of physicians—widespread in Africa—is defined as a binding constraint for the implementation of the AIDS response when there are not enough doctors to follow HIV/AIDS patients and the HIV epidemic is severe. The first criteria were measured by the number of physicians divided by the number of people living with HIV/AIDS in each country. It is estimated that doctors could see an average of 426 patients a year. The severity of the HIV epidemic is defined as a prevalence rate above 5%.

Countries with no severe shortage of physicians should have little difficulty spending the additional funding provided by donors. As a share of health expenditures, the increase is small. But for countries with binding shortages of doctors, the implied increase in government health expenditures would be large. Clearly, these countries would have difficulties in increasing expenditures so much.

Where the lack of doctors is a binding constraint, eliminating any IMF budgetary ceiling would not help much. What good will it do to procure drugs if the doctors to prescribe them are not there or the country does not have the laboratories to do the needed tests? Nor would removing budgetary ceilings increase the

number of doctors in the short term. So, more attention should go to building the capacity of health systems.

Four priorities for global action

Profound changes are needed in the way donor support is mobilized and provided.

Improving what donors finance. There is a disconnect between the expenditures needed to expand the AIDS response and what donors finance. Most financial resources are tied to funding activities and items such as foreign technical assistance, information and education campaigns and in-kind assistance in the form of condoms and antiretroviral drugs. Scaling up the AIDS response requires additional funding to finance mainly recurrent costs (personnel) and local goods and services. Such expenditures are crucial for building the capacity of the health sector to expand its delivery of services, implementing interventions in such other sectors as education and more generally strengthening the capacity of governments to manage large aid inflows.

Making aid flexible. If the AIDS response is to produce the expected results, a new framework is needed for donor support. Since most of the required funding is for financing local and recurrent costs, a strong case exists for providing the bulk of it in budgetary support. The funding should support country-owned AIDS strategies fully integrated within the national development strategy.

Implementing these changes would imply aligning donor assistance with national policies and priorities. Donor aid for the AIDS response should support the implementation of priorities identified in poverty reduction strategies and the national AIDS strategic plans, with greater integration of HIV/AIDS policies in their poverty reduction strategies.

All donor funding should be reflected through the government budget.

While there will continue to be a need for project financing, most of the additional resources required for funding local, recurrent costs would have to be provided through budgetary support. The most efficient way would be to create a pooled fund to finance an agreed programme of HIV/AIDS interventions. Where such an approach is not feasible, a pooled fund for technical assistance should be established. This would improve the efficiency of technical assistance by reducing the number of uncoordinated and overlapping studies and increasing the relevance of assistance to the needs of countries.

Coordinating donor programs at the country level. The donor community needs to consider options for ensuring that the funding centered on the single issue of AIDS is provided to countries in a way that does not undermine the coherence of country strategies. There is growing concern that financial assistance tied to the AIDS response could have adverse impacts on the health sector. It is crucial that donor support be organized around a country-led development strategy that fully integrates the AIDS response.

Strengthening coordination among donors. Major donors agreed in 2004 to three core principles—the Three Ones:

- One agreed HIV/AIDS action framework that provides the basis for coordinating the work of all partners.
- One national AIDS authority in charge of coordinating the implementation of the AIDS response.
- One common country-level monitoring and evaluation system.

The agreed action framework would reflect country priorities, outlining the links with poverty reduction strategies. The national AIDS authority would be in charge of coordination, while the implementation of programmes would be carried out by the usual line ministries. Having a common monitoring and evaluation system would greatly reduce the reporting requirements for donor aid.

Economic management challenge for African countries

Faced with a multitude of AIDS programmes with different procedures and requirements, many hard-pressed governments have found themselves spending more time managing competing donor demands than establishing their own priorities and implementing their own programmes. Common problems include:

- Uncertainty about future funding, which discourages countries from committing themselves to providing antiretroviral therapy over the long term when they don't know whether funding will be available.
- Funding tied to specific sources of technical assistance or to a particular product, which raises prices and reduces efficiency.
- Diverting funds from other development programmes, including health, which in the long run hurts the social and economic development of countries.
- Competition among donors and among recipient agencies, leading to expensive duplication—or even conflicts—in programming.
- Multiplication of parallel implementation channels. Discrete project implementation units are set up within one government body. Or one external partner routes its resources through a national AIDS coordinating authority while another uses a ministry of health, with no coordination between the two.

- The excessive influence of domestic politics (in donor countries) can result in inappropriate prevention and care schemes in local settings.

The global response to HIV and AIDS has brought to the fore a large number of donors and providers of technical expertise—resulting in problems of coordinating donor inputs. The major financial donors met in Washington, D.C. in April 2004 to sign the UNAIDS-sponsored Three Ones agreement on coordinating national AIDS responses: one national AIDS coordinating authority, one national AIDS action framework and one monitoring and evaluation system (box 5.4).

Box 5.4 **The Three Ones**

One agreed HIV/AIDS action framework that forms the basis for coordinating the work of all partners. The common HIV/AIDS Action Framework is a basic element for coordination across partnerships and funding mechanisms and for the effective functioning of a national AIDS coordinating authority.

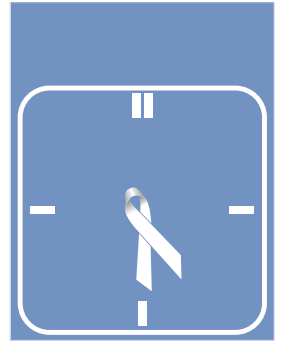
One national AIDS coordinating authority, with a broad multisector mandate. The national AIDS coordinating authority will allow for national ownership of HIV/AIDS response, serve “umbrella functions” for different partnerships and funding mechanisms, facilitate national HIV/AIDS partnership arrangements and provide an enabling national and global environment.

One agreed monitoring and evaluation framework for overall national monitoring and evaluation. No functional “best practice” model for the monitoring and evaluation of countrywide responses to HIV/AIDS has been universally accepted. A countrywide common operational monitoring and evaluation framework will increase the capacity for quality assurance, national oversight and adequate monitoring and evaluation for adapting policy.

Following a March 2005 review meeting of the global response to AIDS, a Global Task Team was created to develop recommendations for improving the institutional architecture of the AIDS response. UN system organizations and the Global Fund to Fight AIDS, Tuberculosis and Malaria should act more quickly to solve problems at country level. Stronger coordination, alignment and harmonization—in the context of the Three Ones, the Millennium Development Goals and the OECD–DAC Paris Declaration on Aid Effectiveness—are essential for rapid, effective scale-ups of the AIDS response.

Increased financial support—especially flexible budgetary support—is unlikely to materialize unless governance and public expenditure management are sound and countries document the results achieved through the mobilization of external aid. A recent report of the United Nations Economic Commission for Africa

documents country progress in governance and public expenditure management (UNECA 2005). External assistance should support this progress by facilitating further improvements to public financial management.



6. Appendix

Sub-regional cases

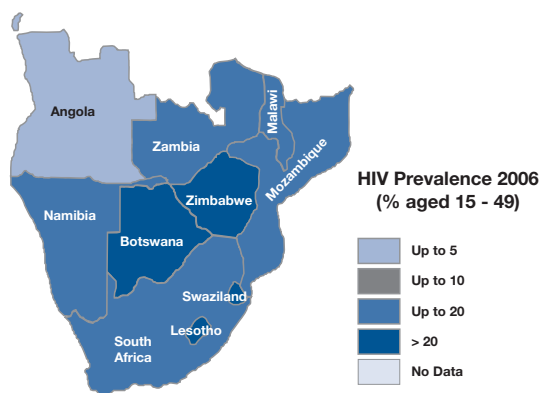
Southern Africa

The scale and trends of the epidemics in the region vary considerably, with southern Africa most-affected. Southern Africa includes the countries of Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. This sub-region accounted almost one third (32%) of all new HIV infections and AIDS deaths globally in 2007, with national adult HIV prevalence exceeding 15% in eight countries in 2005 (Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe).

Figure 6.1

Southern Africa has 9 of the world's 10 countries with 1 in 10 adults infected with HIV

Estimated adult (ages 15–49) HIV prevalence (%)



Data source: UNAIDS/WHO 2007

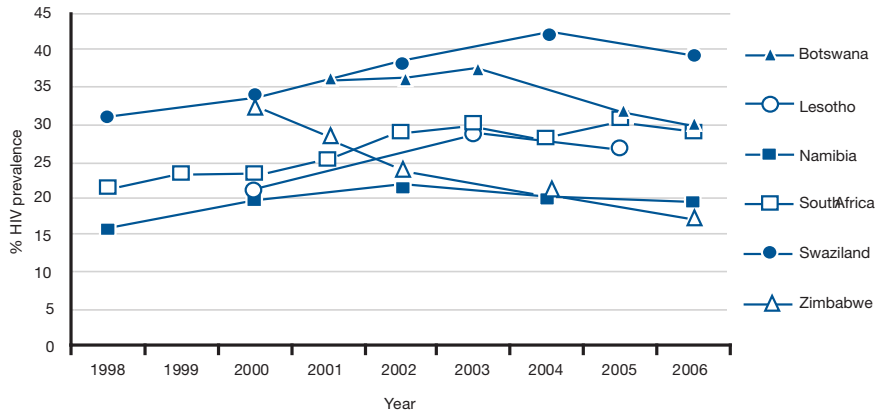
Nowhere else in the world has national adult HIV prevalence reached such levels. However, there is evidence of declines in the epidemics of some countries (notably Zimbabwe), while the epidemics in most of the rest of the sub-region have either reached or are approaching a plateau. Only in Mozambique has the latest HIV data (in 2005) shown an increase in prevalence over the previous surveillance data set.

The epidemics in this region are unique in at least two respects. First, national adult HIV prevalence levels have soared to heights not seen anywhere else in the world. Second, prevalence levels have remained at these high levels for a decade. At this level they can be termed 'hyperendemic'. The overall stabilization of the prevalence figures represents 'stability' only in the limited sense that the number of people newly infected roughly equals the number dying of AIDS (UNAIDS

and WHO 2005). As the provision of antiretroviral treatment expands, more people with HIV will survive longer, increasing the number of people living with the virus, and overall prevalence levels will therefore increase.

Figure 6.2

Median HIV prevalence among women (15-49 years) attending antenatal clinics in consistent sites in southern African countries, 1998-2006



Source: Various antenatal clinic surveys

The epidemics in southern Africa are so severe that their consequences will last for several decades, even should prevalence levels fall. Across the subregion, AIDS has approximately doubled overall mortality and reduced population growth to the extent that it is expected to fall to near zero in many countries. (UN DESA/ Population Division 2007).

In Zimbabwe, HIV prevalence in pregnant women attending antenatal clinics has declined significantly in the past few years, from 26% in 2002 to 18% in 2006. Among young pregnant women (15-24 years) prevalence declined from 21% to 14% over the same period. Infection levels were highest among pregnant women attending antenatal clinics in mining (26% HIV prevalence) and commercial farming (22% prevalence) areas (Ministry of Health and Family Welfare [Zimbabwe], 2007).

Latest HIV prevalence estimates obtained from antenatal clinic surveillance match those reported in the most recent population-based HIV survey, which estimated national adult (15-49 years) HIV prevalence at 18% in 2005-2006 and found that 11% of young women (15-24 years) and 4% of young men were infected with HIV (Central Statistical Office [Zimbabwe] & Macro International, 2007). However, it also found that a considerably larger proportion of

adult women were living with HIV than men: 21% versus 15%. For both men and women, the risk of acquiring HIV increases considerably from their late teens to mid-30s. Six percent of women and 3% of men aged 15-19 years tested HIV-positive, compared to around 35% of women in their 30s and 30-32% of men that age. The data also show a marked increase in the HIV prevalence for people with multiple lifetime sexual partners. For example, 7% of men with only one sexual partner in their lifetime were HIV-positive, compared with 31% of men with ten or more lifetime partners (Central Statistical Office [Zimbabwe] & Macro International, 2007).

Infections level in pregnant women vary considerably from place to place, and range from 11% in Mashonaland Central to above 20% in Matabeland South and Mashonaland West. At Banket (in the north), Victoria Falls (on the western border with Zambia) and Beitbridge (on the border with South Africa, in the south) at least 25% of antenatal clinic attendees tested HIV-positive in 2006 (Ministry of Health and Family Welfare [Zimbabwe], 2007).

The declining trend observed in Zimbabwe's surveillance data is supported by several studies (UNAIDS, 2005; Mahomva et al., 2006; Hargrove et al., 2005; Mugurungi et al., 2005; Ministry of Health and Child Welfare [Zimbabwe], 2007), while declining prevalence among both men and women has also been observed in rural parts of Manicaland (Gregson et al., 2006). The trend reflects a combination of very high mortality and declining HIV incidence, related, in part, to behaviour change (UNAIDS, 2005). There is evidence from eastern Zimbabwe that more women and men have been avoiding casual sex liaisons, and that consistent condom use with 'casual' partners increased for women (from 26% in 1998-2000 to 37% in 2001-2003), though not for men (Gregson et al., 2006). More detailed discussion can be found in UNAIDS (2006). Mathematical modeling also suggests that the declines in HIV prevalence could not be attributed solely to the natural evolution of Zimbabwe's AIDS epidemic (Hallet et al., 2006).

A comparison of data in the 1999 and 2005 Demographic and Health Surveys show only minor changes in condom use during higher-risk sex. In 1999, 42% of women said they used condoms the last time they had sex with a non-regular partner, compared with 47% in 2005, while for adult men condom use during higher-risk sex remained about the same (70% vs 71%) But paid sex appears to have decreased: the 7% of adult men in 1999 who said they had bought sex in the previous year decreased to only 3.8% in 2005. On the other hand, condom use declined slightly among those men who said they had paid for sex—from 82% in 1999 to 73% in 2005 (Central Statistical Office [Zimbabwe] & Macro International, 2000 & 2007).

Against the background of economic deterioration, the impact of AIDS illness and death, in particular, is threatening household viability. According to one recent study in the east of the country, almost four in ten (39%) households dissolved or relocated after an AIDS death, compared to one in four (27%) households that had experienced a non-AIDS death. AIDS deaths more often resulted in the loss of the head of the household, while households with AIDS deaths spent significantly more on health care than did households with a non-AIDS death. Median expenditure on healthcare, funeral and memorial services equalled one quarter of the average annual per capita income (Gregson et al., 2006).

With an estimated 5.5 million [4.9 million - 6.1 million] (UNAIDS, 2006)¹ people living with HIV in 2005, South Africa is the country with the largest number of infections in the world. The country's Department of Health estimates that 18.3% of adults (15-49 years) were living with HIV in 2006 (Department of Health [South Africa], 2007). More than half (55%) of all South Africans infected with HIV reside in the KwaZulu-Natal and Gauteng provinces (Dorington et al., 2006).

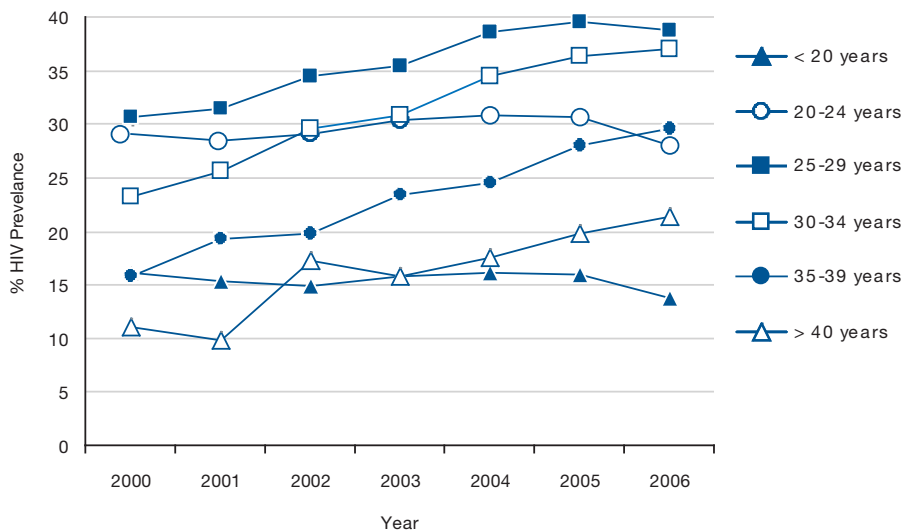
The latest HIV data collected at antenatal clinics suggest that HIV infection levels might be levelling off, with HIV prevalence in pregnant women at 30% in 2005 and 29% in 2006 (Department of Health South Africa, 2007). In addition, the decrease in the percentage of young pregnant women (15-24 years) found to be infected with HIV suggests a possible decline in the annual number of new infections. The consistently high and rising prevalence among older antenatal clinic attendees is a concern that needs further investigation (see graph).

The epidemic varies considerably between provinces. HIV prevalence among pregnant women is highest in the populous KwaZulu-Natal province, at 39%, and lowest in the Northern Cape, Western Cape and Limpopo provinces, at 15%, 16% and 19%, respectively. In the five other provinces (Eastern Cape, Free State, Gauteng, Mpumalanga and North West) at least 25% of women attending antenatal clinics in 2006 tested HIV-positive (Department of Health [South Africa], 2007). There is also variation within provinces and populations. For example, in the Northern Cape, prevalence among pregnant women ranged from an average of 5% at clinics in one district to almost 23% in another, while in Limpopo province it varied from 14% to 28%, depending on the district. Similarly, although only 9% of South Africa's population (aged 2 years and over) live in urban informal settlements, 29% of persons living with HIV are found in these areas (Rehle et al., 2007b).

¹ All estimates of the total number of people living with HIV in a given country are for 2005.

Figure 6.3.

HIV prevalence by age group among antenatal clinic attendees in South Africa, 2000-2006



Source: Department of Health, South Africa, 2000-2006

Very high prevalence levels have been found in parts of KwaZulu-Natal. For example, in Amajuba district, 47% of women attending antenatal clinics tested positive in 2006 (Department of Health South Africa, 2007), as did 51% of women aged 25-29 years who participated in an earlier household-based HIV survey in the rural district of Umkhanyakude (Welz et al., 2007). HIV incidence of 8% was found in men and women aged 25-29 years in another study in a rural district in the north of the same province. On current trends, and in the absence of effective interventions, it is estimated that two thirds of the 15-year-olds in that district could be infected with HIV by the time they reach their 35th birthday (Barnighausen et al., 2007).

Studies indicate that young women face greater risks of becoming infected than men. Indeed, among 15-24 year-olds, women account for about 90% of new HIV infections (Rehle et al., 2007b). HIV incidence among 20-29 year-old women in 2005 was approximately 5.6%, more than six times higher than for males of the same ages (0.9%) (Rehle et al., 2007b). But very high HIV incidence is being found also among slightly older men: in a northern KwaZulu-Natal study, an estimated 8.8% of men aged 24-29 years had been newly-infected in the previous year (Barnighausen et al., 2007).

An estimated 1.8 million South Africans have died from AIDS since the epidemic began (Dorrington et al., 2006). Total annual deaths (from all causes) increased by 87% from 1997 to 2005 (from 316 505 to 591 213) (Statistics South Africa, 2005 & 2006); it is estimated that at least 40% of those deaths were AIDS-related (Anderson and Phillips, 2006; Actuarial Society of South Africa, 2005; Medical Research Council, 2005; Bradshaw et al., 2004). Rising death rates lowered life expectancy at birth to 49 years for males and 52.5 years for females in 2006, and have probably contributed to the decline in the country's population growth rate from 1.25% in 2001-2002 to just over 1% in 2005-2006 (Statistics South Africa, 2007).

In Swaziland, according to preliminary data from a new population-based survey, one in four (26%) adults (15-49 years) are HIV-infected. This is the highest prevalence ever found in a national population-based survey anywhere in the world. Both antenatal and population-based survey data show little difference in HIV prevalence between regions, but there is a significant difference in infection levels between men and women: 20% of adult men tested HIV-positive, compared with 31% of women (Ministry of Health and Social Welfare, 2007; Central Statistical Office [Swaziland] & Macro International, 2007).

HIV prevalence found among antenatal clinic attendees remains among the highest in the world. There is some evidence that many young women (more than 60%, according to one study) abstain from sex until their late teens (Buseh, 2004), but HIV infection levels rise rapidly once women become sexually active. One in two (49%) 20-34 year-olds attending antenatal clinics and the same proportion of women aged 25-29 years who participated in the 2006 population-based HIV survey were found to be HIV-infected, as were one in four (26%) pregnant teenagers (15-19 years) (Ministry of Health and Social Welfare [Swaziland], 2006; Central Statistical Office [Swaziland] & Macro International, 2007). HIV infection levels in men reach similar heights, but in older age groups: 44% of men aged 30-34 years and 45% of those aged 35-39 years were found to be infected with HIV. Unusually high HIV prevalence is found also among older men and women, with around one quarter (28% and 24%, respectively) of those aged 50-54 years also found to be HIV-infected (Central Statistical Office [Swaziland] & Macro International, 2007).

AIDS awareness and knowledge appears not to be associated with safer behaviour to the extent anticipated. HIV knowledge is high, with more than 85% of women and 80% of men saying that HIV transmission can be prevented by using condoms and restricting sexual intercourse to one, uninfected partner. Yet just over half of adult men (56%) and women (57%) who reported more than two sexual partners in the previous year said they had used a condom the last time they had sex (Central Statistical Office [Swaziland] & Macro International, 2007).

Lesotho's HIV prevalence levels remain high. Almost one in four (23% [21.9%-24.7%]) Basotho adults (15 -40 years of age) were living with HIV in 2005 (UNAIDS, 2006), with infection levels highest in urban areas. Women account for about 57% of people living with HIV, with prevalence among antenatal clinic attendees reaching 38% in the 25-29 year age group in 2005 (Ministry of Health and Social Welfare [Lesotho], 2005). The most recent HIV data show a decline in infection levels among young (15-24 years) pregnant women from about 25% in 2003 to 21% in 2005, but the apparent decrease might be due to the addition of new sentinel surveillance sites in the most recent survey (Ministry of Health and Social Welfare [Lesotho], 2005).

Prevention efforts in Lesotho lack the quality and scale needed to reverse the epidemic. HIV knowledge is poor. Fewer than one in five married (and fewer than one in three unmarried) young people (15-24 years) could demonstrate comprehensive knowledge of HIV when surveyed in 2004. In addition, a large proportion of young people are sexually active at very young ages – more than one quarter of young men (27%) were having sex before they turned 15, as were 15% of young women. Very few (7% of the boys and 4% of the girls) used a condom the first time they had sex. Among young men having extramarital sex, condom use in 2004 was almost non-existent: only 5% of married or cohabiting young men said they used a condom during sex with their other partner(s) in the previous 12 months (Ministry of Health and Social Welfare [Lesotho] & ORC Macro, 2004). Reluctance to use condoms has been found in other studies, too, including one among inmates at Quthing prison. Despite relatively high knowledge of HIV (about 70% of the men knew at least one way of preventing HIV infection), 42% said that they would not use a condom (Akeke et al., 2007).

As in other countries in the region, there is a huge need and opportunity to improve HIV prevention within marriages and other long-term relationships in Lesotho. It is estimated that about 40% of HIV-infected couples are 'discordant', i.e. one but not both persons are HIV-positive (Corno & De Walque, 2007).

Overall, the epidemic in Namibia appears to have stabilized with one in five women (20%) seeking antenatal care testing HIV-positive in 2006 (Ministry of Health and Social Services, 2007). But the risk of HIV varies considerably across this large, sparsely populated country. HIV prevalence below 10% was found among pregnant women in Gobabis (in the east) and Windhoek (the capital), but in Engela and Oshakati (in the far north) it exceeded 25% and it reached 39% in Katima Mulilo, at the country's eastern tip (Ministry of Health and Social Services, 2007). Indeed, the relatively steady trend since the mid-1990s in HIV prevalence among young pregnant women (15-24 years), and the rising trend among those in their 30s suggests that prevention efforts need to be improved (Ministry of Health and Social Services, 2007).

Preliminary data from a 2006 population-based survey show that nine in ten (90%) sexually active young (15-24 years) men and three quarters (75%) of young women reported having had 'higher-risk' sex (that is, sex with a non-marital, non-cohabiting partner) in the previous 12 months. Half those women (48%) and one third of the men did not use a condom consistently with those partners (Ministry of Health and Social Services & ORC Macro, 2007). In another survey (carried out in the towns of Keetmanshoop, Oshakati, Rundu and Walvis Bay), around one in ten (11%) sexually active young men (15-24 years) and almost one in three (29%) of their female counterparts said their most recent sexual partnership had been with a person at least ten years older than them. Because HIV prevalence tends to be highest among women in their 30s and men in their mid-30s to mid-40s, these young people face a high risk of acquiring HIV (Parker & Connolly, 2007).

The decrease in HIV infection levels among pregnant women attending antenatal clinics in Botswana in recent years (from 36% in 2001 to 32% in 2006) suggests that the epidemic there has also reached its peak and could be on the decline. Based on these and other HIV data (including data from a recent population-based HIV survey), it is estimated that one in four adults (24% [23.0%-32.0%]) of 15-49 year olds in Botswana were living with HIV in 2005 (UNAIDS, 2006). Botswana's epidemic therefore remains severe.

Half the pregnant women aged 30-34 years tested for HIV at antenatal clinics in 2005 were found to be infected with HIV, as were 45% of those aged 25-29 years (Seipone, 2006). Infection levels in pregnant women varied across the country – from a low of 21% in the Goodhope district in the south to over 40% in the Francistown and Tututume districts (in the northeast), and 47% in Selebi-Phikwe (a densely-populated mining community in the east). Prevalence was unusually high even among pregnant teenagers, 18% of whom tested HIV-positive in 2005. This, however, was the lowest infection level seen among pregnant women in that age group since the early 1990s, suggesting a possible decrease in new infections (Ministry of Health [Botswana], 2006). Such an interpretation is supported by the ongoing decline in HIV prevalence observed among young pregnant women. Among 15-19 year-old women attending antenatal clinics, prevalence decreased from 25% to 18% between 2001 and 2006, while among their 20-24 year-old counterparts it declined from 39% to 29% over the same period (Ministry of Health [Botswana], 2006).

There is evidence that condom use among teenagers has increased. In 2001, 81% of unmarried men in their late teens (15-19 years) said they had used a condom the last time they had sex, compared to 95% in a 2004 survey. Among their unmarried female counterparts, the corresponding figures were 71% in 2001 and 82% in 2004. However, misconceptions about HIV persist, with almost one third (30%) of survey respondents in 2004 claiming that HIV can be acquired by

supernatural means and more than one half believing the virus can be transmitted by mosquitoes. Only one in five (21%) persons knew that having multiple sexual partnerships increases the risk of HIV infection, and three in four knew that condoms can prevent HIV transmission (National AIDS Coordinating Agency & Central Statistical Office, 2005). The latter finding is consistent with evidence that significant levels of high-risk sexual behaviour have persisted: one in four (23%) sexually-active participants in a population-based survey said that they had had concurrent sexual relationships with two or more partners in the previous 12 months (Carter et al., 2007).

At least one third of adults are believed to know their HIV status (Weiser et al. 2006). After Botswana implemented a massive opt-out voluntary counselling and testing system in 2003, the uptake of HIV testing more than doubled from about 61,000 in 2004 to almost 158 000 in 2005, when about 89% of persons who were offered an HIV test agreed to be tested. More than two thirds (69%) of the people who were tested for HIV in 2005 were women (Steen et al., 2007). The percentage of pregnant women who know their HIV status has grown considerably – from 47% in 2003 to 78% in 2004, for example, among women delivering babies at the regional referral hospital (which performs deliveries for most of Francistown's pregnant women, as well as for many women from outlying areas). The proportion of pregnant women receiving treatment to prevent the transmission of HIV to their infants also increased (from 29% to 56%) in the same study. After the introduction of routine, on-site rapid tests in antenatal clinics in 2005, nearly all tested women received their results and intervention uptake increased even further to 75% (Creek et al., 2007).

The latest HIV data collected at antenatal clinics in Angola indicate that HIV prevalence among pregnant women did not change much between 2004 and 2005. Median national HIV prevalence was estimated at 2.4% in 2005, compared with 2.4% in 2004 (Ministério da Saúde & CDC [USA], 2006). Because only 40% of pregnant women access antenatal services (which are located mainly in urban or peri-urban areas), these HIV data provide an incomplete picture of Angola's HIV epidemic. Nevertheless, HIV infection levels among antenatal clinic attendees in 2004-2005 varied from under 1% in Bie province (in the centre of the country) to 2.7% in the capital, Luanda, 4.2% in Huila province (in the south) and 11% neighbouring Cunene province (which borders Namibia) (Ministério da Saúde & CDC [USA], 2006). Other earlier surveys have revealed high HIV prevalence of 33% among female sex workers in Luanda (Grupo Tematico, 2002) and 9% among male and female independent miners in Lunda Norte province (which borders the Democratic Republic of Congo) (Ministério da Saúde & CDC [USA], 2006).

In the other Lusophone country of this sub-region, Mozambique, it is estimated that 16.1% [12.5%-20.0%] of adults (15-49 years of age) were living with HIV in

2005 (UNAIDS, 2006). After appearing to stabilize in the early 2000s, Mozambique's epidemic has again grown, with HIV prevalence rising in all three zones of the country. HIV infection levels found in women attending antenatal clinics are lowest in the north (average of 9% in 2004), but in the central and southern zones prevalence of 20% or more has been found, including in the capital, Maputo, and in Gaza, Inhambane, Manica and Sofala provinces (where it reached almost 27% in 2004) (Conselho Nacional de Combate ao HIV/SIDA, 2006). The reasons for the lower prevalence in the north are not well understood but could include the fact that male circumcision is widespread in that part of the country.

Rising infection levels among young people (15-24 years) suggest that new HIV infections in Mozambique are still increasing (Conselho Nacional de Combate ao HIV/SIDA, 2006). Among young adults in the northern zone, HIV prevalence doubled to 10% between 2000 and 2004, while it rose from about 12% to 18% in the south (Ministry of Health [Mozambique], 2005). However, there are some signs that prevention activities among school-going adolescents are prompting more young people to protect themselves against possible HIV infection. In one such programme, introduced in five provinces, the percentage of teenagers who said they used a condom the first time they had sex almost doubled, from 36% to 60% between 2003 and 2005 (Tivane et al., 2006).

The lower levels of infection observed in Cabo Delgado, Inhambane, Nampula and Niassa (all in the north), compared with other regions, could be maintained if successful prevention efforts are expanded. Prevention efforts should also be scaled up among people enrolled in the country's expanding antiretroviral therapy programme. A study among persons starting antiretroviral treatment has found that 70% of the sexually-active patients had had unprotected sex in the three months before starting treatment, and only one quarter (26%) of the patients had disclosed their HIV status to their partners whose HIV status was unknown or negative (Pearson et al., 2007).

Malawi's epidemic appears to have stabilized amid some evidence of behavioural changes that can reduce the risk of HIV infection (Heaton et al., 2006). Median HIV prevalence among pregnant women at sentinel surveillance sites has remained between 15% and 17% since the turn of the century (National AIDS Commission, Ministry of Health [Malawi], 2005).

Adult (15-49 years) HIV prevalence was estimated at 14% [6.9%-21.4%] in 2005 (UNAIDS, 2006). Results from a triangulation study suggest that prevalence could be declining in parts of the country, with evidence of decreasing HIV prevalence among women attending antenatal clinics in some urban areas (where average HIV prevalence of 18% is much higher than the 11% found in rural areas) (National AIDS Commission, [Malawi], 2007; Ministry of Health and Population [Malawi], 2005a). HIV prevalence among women using antenatal

services in the capital, Lilongwe, for example, fell from 27% in 1996 to 17% in 2003 before rising slightly again in 2005 to 19% (Bello, Chipeta & Aberle-Grasse, 2006; National AIDS Commission & Ministry of Health, 2005). However, there are regional differences in the spread of HIV. Infection levels in the south are as high as 20-22% (in Mulanje, Mangochi, Thyolo and Blantyre), but are considerably lower in the north (8%) and centre (7%) (National Statistical Office & ORC Macro, 2005).

Overall, it appears that young women have higher risks of acquiring HIV than young men. Among young people (15-24 years) nationally, women are more than four times more likely to be infected with HIV than men (9% prevalence versus 2%). Regionally, these gender differences also occur. Among young people (15-24 years), HIV prevalence among females in the North was more than 12 times higher than among males, while in the South and Central regions it was more than four and three times higher, respectively (National Statistical Office & ORC Macro, 2005).

There is still considerable room for strengthening HIV prevention in Malawi. Comprehensive knowledge about HIV (defined as 'knowing at least two ways to prevent infection' and 'holding no major misconceptions about the virus') is low. Only one in five adult women (22%) and a little more than one in three adult men (39%) demonstrated such knowledge when surveyed, as did similar proportions of young men and women (National Statistical Office & ORC Macro, 2005). At the same time, the proportion of men reporting sex with non-regular, non-cohabiting partners decreased from 33% to 26% in 2003-2004 (although it did not change among women), while the percentage of men who said they had used condoms the last time they had sex with a non-marital, non-cohabiting partner rose from 39% to 47% (Ministry of Health and Population [Malawi], 2005b).

Progress is evident in other areas. The number of women accessing services for preventing mother-to-child transmission of HIV rose ten-fold between 2002 and 2005, when it reached 53,000. Almost three quarters (72%) of pregnant women who tested HIV-positive at antenatal clinics received antiretroviral prophylaxis (Ministry of Health and Population [Malawi], 2005b).

While there is little sign of a decline in HIV infections at the national level in Zambia, the epidemic appears to be receding in some parts of the country. Just over one million [1.1-1.2 million] Zambians were living with HIV in 2005, equivalent to approximately 17% [15.9%-18.1%] of the adult (15-49 years old) population (UNAIDS, 2006).

The most recent HIV surveys at antenatal clinics showed HIV infection levels among pregnant women to be twice as high in urban compared with rural areas (25% versus 12%) (Ministry of Health, 2005), as did earlier population-based

survey estimates (23% versus 11%) (Central Statistical Office et al., 2003). Prevalence is especially high in cities and towns along main transport routes (such as Kabwe, Livingstone and Ndola), compared with more secluded rural areas. HIV prevalence of up to 30% has been found among pregnant women in Livingstone, but was under 10% in Kasaba (in the far north), Macha (in the south) and Mukinge (in the centre) (Ministry of Health [Zambia], 2005).

HIV prevalence has declined among 20-24 year-old pregnant women in urban areas (where it dropped from 30% in 1994 to 24% in 2004) and their 15-19 year-old counterparts (down from 20% in 1994 to 14% in 2004) (Ministry of Health [Zambia], 2005). In some communities, there was a decrease in HIV prevalence among the most educated women; in other communities, infection levels among young pregnant women increased (Sandoy et al., 2006). Additionally, changes in HIV prevalence are reported in some population-based surveys, which show HIV prevalence in young people (15-24 years) declining steeply between 1995 and 2003. Among young rural residents surveyed in 1995 and 2003, prevalence fell from 16% to 6.4% in females and from 5.6% to 3.1% in males, while among their urban peers it decreased from 23% to 12% in females and from 7.5% to 3.2% in males (Michelo et al., 2006a). Behaviour changes were reported among higher-educated, urban young people (Michelo et al., 2006b), among whom a significant increase in condom use during 'casual' sex was observed between 1995 and 2003 (Sandoy et al., 2007).

Other research confirms that some Zambians are adopting behaviours that can protect them against HIV infections. The proportion of sexually active men who reported having sex with a 'non-regular' partner in the previous 12 months, for example, declined from 39% in 1998 to 28% in 2005. Among married men, the proportion who said they had no casual partners in the previous year increased from 79% to 90% over the same period. No such change was observed among women (Central Statistical Office [Zambia], 2006). However, the proportion of young (15-24 years) urban women who said they used a condom the last time they had 'casual' sex almost doubled between 1995 and 2003, from 46% to 82%, while the percentage of young urban men reporting more than two 'casual' partners in the previous year declined from 52% to 39% (Sandoy et al., 2007). It appears that a fear of AIDS-related mortality, combined with prevention programmes, has prompted changes in behaviour, which in turn have reduced the risk of acquiring HIV infection (Michelo et al., 2006a).

These reported positive changes, however, are set against other challenges. For example, about 40% of health workers surveyed at five Zambian hospitals did not believe that condoms were effective in preventing HIV. Of the one quarter (26%) of sexually-active health workers who reported having several sexual partners, more than one third (37%) did not use condoms (Kiragu et al., 2007). Similarly, in a study in five rural areas, almost half (46%) of the sexually-active

young people said they did not use condoms (Mwansa, 2006). Stigma remains a concern, as well. When surveyed in five districts, two thirds of married women who were starting antiretroviral therapy said they had not disclosed their HIV status to their husbands for fear of blame and/or abandonment (Zulu, 2005).

As in many other countries, the frequency of sex between men in Zambia and its possible role in the country's HIV epidemic is still poorly understood. One recent study found high levels of sexual risk-taking behaviour (defined as 'unprotected anal sex') among surveyed men who have sex with men. More than two thirds of the men (68%) said they had had unprotected anal sex with men and women, and almost three quarters (73%) thought anal sex was safer than vaginal sex. One in three (33%) of the men tested HIV-positive (Zulu et al., 2006).

Much smaller epidemics are underway in the island nations of southern Africa. Recent HIV data collected from pregnant women using antenatal services in Madagascar show an HIV prevalence of 0.2%, although infection levels were 1.1% in Sainte Marie and 0.8% in Morondava. The same surveillance data revealed high levels of syphilis infection among pregnant women – 5.1% nationally, and almost 10% in Sainte Marie and Toliara (Ministere de la Sante et du Planning Familial, 2005), suggesting high frequency of unprotected sex. Earlier studies have shown condom use to be infrequent and HIV knowledge to be poor. Only one in five Madagascans could name two methods for preventing the sexual transmission of HIV when surveyed in 2003-2004, and one in 10 (12%) sexually-active young men and one in 20 (5%) young women said they had used a condom the last time they had sex with a casual partner (Institut National de la Statistique and ORC Macro, 2005). No information is available on injecting drug use and on men who have sex with men in Madagascar.

Exposure to contaminated injecting equipment is the main risk factor for HIV infection in the currently small HIV epidemic in Mauritius, where about three quarters of the HIV infections diagnosed in the first six months of 2004 were among drug injectors (Sulliman & Ameerberg, 2004). Sharing of injecting equipment appears to be common: 80% of drug injectors said they had shared needles in the previous three months, when surveyed in a 2004 Rapid Situation Assessment. Among those injecting drug users who were tested for HIV, 4% were found to be infected. Also of concern is the large percentage of sex workers (75%) who said that they also injected drugs, and the comparatively low reported rate of condom use (only 32% said they had consistently used condoms during the previous three months). Overall, 13% of the surveyed sex workers tested HIV-positive (Sulliman, Ameerberg & Dhannoo, 2004). Mauritius needs to focus stronger prevention efforts on injecting drug users and especially on those who also engage in sex work (Dewing et al., 2006).

Box 6.1

The twin challenge of tuberculosis and HIV

An estimated 8.8 million new tuberculosis cases occurred worldwide in 2005—more than 80% of them in Asia and sub-Saharan Africa. It is estimated that over 600 000 of those persons were co-infected with HIV.

People living with HIV are at much greater risk of developing tuberculosis disease than people who are HIV negative (Antonucci et al., 1995; Selwyn et al., 1989). Furthermore, HIV is responsible for the high tuberculosis incidence in many parts of Africa and some parts of Asia (WHO, 2007). In southern Africa, the sub-region with the highest HIV prevalence, it is estimated that 50%–80% of tuberculosis patients are also HIV-positive (Sharma et al., 2005; Sonnenberg et al., 2005). In Swaziland, for example, 80% of tuberculosis patients tested HIV-positive in the 2006 sentinel survey, and tuberculosis continues to be the most likely cause of death for HIV-positive persons (Ministry of Health and Social Welfare [Swaziland], 2006). HIV is an important factor in tuberculosis in other parts of Africa, for example, in Ethiopia, an estimated one third (34%) of the 141,000 tuberculosis cases in 2005 were in persons who were also infected with HIV (Federal Ministry of Health Ethiopia, 2006).

Despite this heavy burden of HIV among tuberculosis patients, in 2005, only 7% of tuberculosis patients were tested for HIV globally, and only 14% of the estimated total of tuberculosis cases among people living with HIV were detected (WHO, 2007). Yet, when tuberculosis patients are tested for HIV, a significant proportion of those found to be HIV-infected do receive treatment. Thus, in 2005, 91% of HIV-positive tuberculosis patients accessed co-trimoxazole and 38% accessed antiretroviral therapy (WHO, 2007). Lack of access to HIV counselling and testing for tuberculosis patients therefore stands in the way of increasing access to HIV treatment and care. However, the introduction of provider-initiated HIV counselling and testing has led to substantial increases in the numbers of tuberculosis patients tested for HIV and the numbers of HIV-positive tuberculosis patients starting on CPT and antiretroviral therapy (see Figure 6.4).

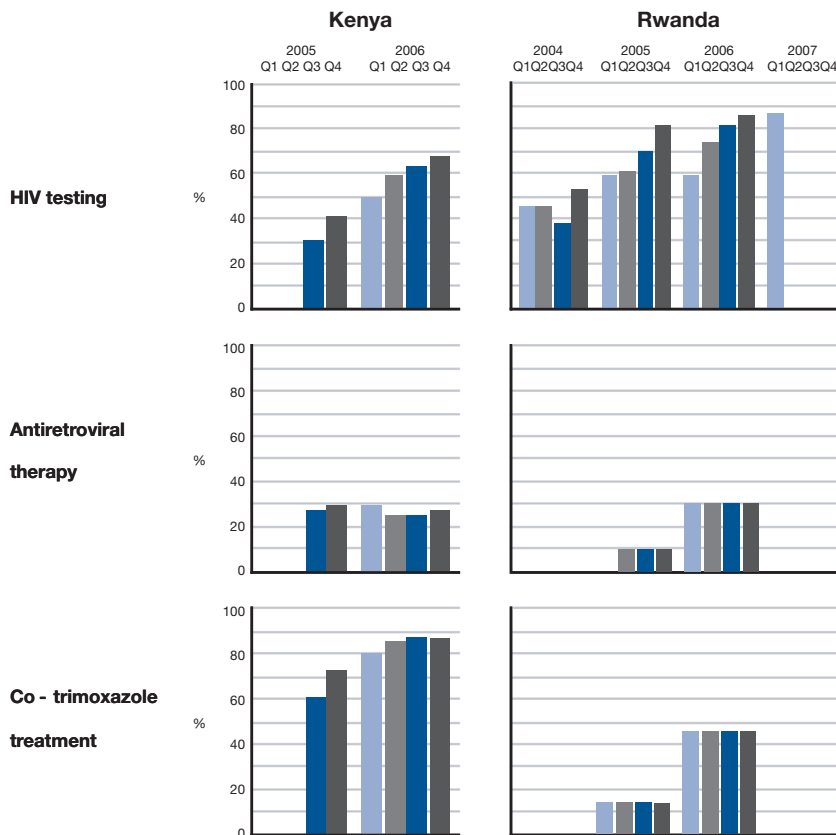
Globally less than 0.5% of people living with HIV were screened for tuberculosis in 2005. But in the increasing number of countries who reported screening for tuberculosis symptoms among people living with HIV in 2005, overall about 12% of people living with HIV screened were found to have active tuberculosis disease (WHO, 2007).

HIV is increasing tuberculosis incidence in many parts of the world, placing additional stress on already under-resourced tuberculosis control programmes and contributing to the development and spread of drug-resistant tuberculosis. Drug-resistant tuberculosis, and especially extensively drug-resistant tuberculosis (with resistance to both first- and second-line anti-tuberculosis drugs) can spread rapidly in communities of people living with HIV and results in very high mortality—as seen in South Africa, for example (Gandhi et al., 2006). There, tuberculosis case reports collected by the Department of Health show that the tuberculosis incidence rate increased from 169 per 100,000 people in 1998 to 645 per 100,000 people in 2005 (Government of South Africa, 2007).

Tuberculosis remains a major cause of illness and death in people living with HIV. Efforts to scale up collaborative tuberculosis and HIV activities are currently inadequate and many opportunities to provide life-saving prevention and treatment for both diseases are being missed. Moreover, data collection is often poor. Much stronger coordination of tuberculosis and HIV programmes is needed in order to achieve universal access to tuberculosis and HIV prevention, treatment, care and support.

Figure 6.4

Progress of HIV testing therapy and cotrimoxazole treatment of TB patients in Kenya and Rwanda 2004-2007



Sources: National Tuberculosis Programme Kenya; and National Tuberculosis Programme Rwanda

Note: Cotrimoxazole is a prophylactic recommended by WHO

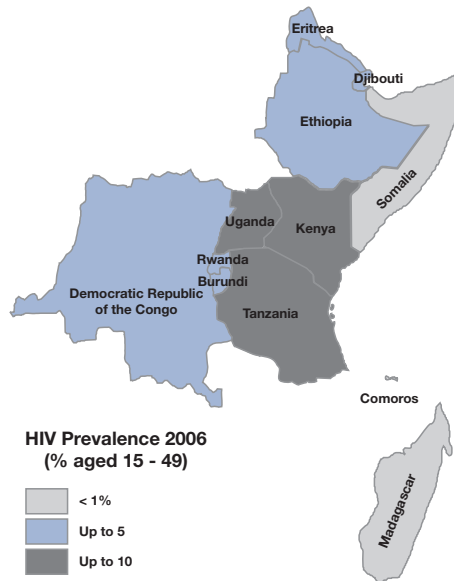
East Africa

In most of the countries in East Africa, adult HIV prevalence is either stable or declining slightly. The latter trend is most evident in Kenya, which is experiencing a slow but steady decline in HIV prevalence amid evidence of changing behaviour. Besides behaviour change, mortality of people infected several years ago is another contributing factor to the declines in HIV prevalence.

Uganda was the first country in sub-Saharan Africa to register a drop in adult national HIV prevalence. Its epidemic, however, remains serious. An estimated 6.7% [5.7%-7.6%] of adults (15-49 years) were living with HIV in 2005 – approximately one million people [850 000-1.2 million] (UNAIDS, 2006).

Infection levels are highest among women (7.5% compared to 5.0% among men) and urban residents (10% compared to 5.7% among rural residents). Prevalence among children younger than five years of age was 0.7% (Ministry of Health [Uganda] & ORC Macro, 2006).

Figure 6.5
Estimated adult (ages 15–49) HIV prevalence (%)



Data source: UNAIDS/WHO 2006

Starting in 1992, significant decreases in HIV prevalence were observed in Uganda, alongside evidence of substantial behaviour change that inhibited the spread of HIV (Asamoah-Odei, Garcia-Calleja & Boerma, 2004). However, that trend appears to have stabilized in the early 2000s, and there are now concerns that the HIV epidemic could be growing again. While the decline in HIV prevalence observed among pregnant women attending antenatal clinics in Kampala and some other urban areas appears to have persisted through 2005, other urban and most rural surveillance sites indicate an overall levelling of prevalence during the current decade (Kirungi et al., 2006; Shafer et al., 2006). Similarly, in a cohort study in a rural area in southern Uganda, there is evidence that HIV prevalence and incidence rates have levelled since about 2000 in both men and women (Shafer et al., 2006). It is important to note that with a population growing as rapidly as in Uganda (which had a total fertility rate of 6.7, according to the 2006 Demographic and Health Survey), a stable HIV incidence rate means that an increasing number of people acquire HIV each year.

The stable HIV trends are occurring alongside an apparent increase in behaviour that favours HIV transmission. In national population-based surveys conducted in 1995, 2000, 2004-5, and 2006, higher-risk sex² was reported by 12%, 14%, 15% and 16% of adult women respectively, and by 29%, 28%, 37% and 36% of adult men respectively (Kirungi et al 2006; Ministry of Health [Uganda] & ORC Macro, 2006; Uganda Bureau of Statistics & Macro International Inc. 2007). In the same surveys, condom use during sex with these partners was reported by 20%, 39%, 47% and 35% of women, respectively, and by 35%, 59%, 53% and 57% of men, respectively, indicating a lack of progress in promoting safer sex in recent years. The 2004-2005 AIDS Indicator Survey also highlighted the importance of the potential for transmission within couples. Of almost 4,000 couples tested for HIV, 3% were concordant HIV-positive, while 5% were discordant. There is an urgent need to revive and adapt the kind of prevention efforts that helped bring Uganda's HIV epidemic under control in the 1990s.

Kenya's AIDS epidemic is of the same scale as Uganda's. The estimated 5.1% of adults (15-49 years) living with HIV in 2006 is equal to approximately nearly 1 million people— a large epidemic, despite evidence of a slow but steady decline in HIV prevalence (National AIDS Control Council [Kenya], 2007). Adult HIV prevalence is almost twice as high among women (8.7%) than among men (4.6%), according to a national population-based HIV survey (Central Bureau of Statistics, Ministry of Health [Kenya] & ORC Macro, 2004).

Nationally, HIV infection levels decreased from a high of around 14% in the mid-1990s to 5% in 2006 (Ministry of Health [Kenya], 2005; National AIDS Control Council [Kenya], 2007). The downward trend was especially profound in the urban sites of Busia, Meru, Nakuru and Thika, where median prevalence declined from 28% in 1999 to 9% in 2003 among 15–49 year-old women attending antenatal clinics, and from 29% in 1998 to 9% in 2002 among those aged 15–24 years (Hallett et al., 2006).

There is evidence of changing behaviour in Kenya which could be associated with these declines in HIV prevalence. In population-based surveys, the proportions of unmarried young people (15-24 years) who said they were sexually active changed from 56% to 41% for males and from 32% to 21% for females between 1998 and 2003. In addition, the percentage of adults (15-49 years) with multiple partners decreased by almost half in the same period. Persons with more than one partner were also more likely to have used condoms the last time they had 'higher-risk' sex in 2003, compared with 1998 (Central Bureau of Statistics, Ministry of Health [Kenya] & ORC Macro, 2004; National Council for Population and Development et al., 1999).

2 Defined as sex with a person who neither was a spouse nor lived with the respondent.

Box 6.2

Hidden epidemics among men who have sex with men

The role of sex between men in sub-Saharan Africa's HIV epidemics is poorly understood. However, a number of recent studies indicate that sex between men could be an important factor in several of the epidemics in this region, despite the widely-held assumption that sex between men is 'alien' to African societies.

One study has estimated that more than 700 men were selling sex to other men in Mombassa, Kenya, for example (Geibel et al., 2007), which implies a reasonably large population of male clients willing to pay for sex with men (van Griensven, 2007). Several other studies have been able to easily locate and enrol men who have sex with men as participants. In one ongoing study among men who have sex with men in the town of Kilifi, located on Kenya's coastline between Mombassa and Malindi, it was found that more than 38% of the 60 men in the study group were HIV-positive at baseline (Sanders et al., 2006). Lower levels of HIV infection have been found among men who have sex with men in other parts of Kenya (11% among men at voluntary and counselling sites), in Dakar, Senegal (22%) and in Khartoum, Sudan (9%) (Angala et al., 2005; Wade et al., 2005; Elrasheid, 2006). In all those studies, prevalence among men who have sex with men was higher than in the general population.

As in other regions of the world, it appears that the majority of African men who have sex with men also have sex with women – two thirds or higher, according to some studies (Onyanga-Ouma et al., 2005; Angala et al., 2006; Wade et al., 2005). Once HIV is introduced into networks of men who have sex with men, the virus is therefore also likely to be transmitted to the men's wives and girlfriends (given the typically low rates of condom use between regular partners), and subsequently to their newborn babies (van Griensven, 2007).

There is a clear need for further research on this aspect of the HIV epidemics in sub-Saharan Africa, and for prevention efforts that focus on averting HIV transmission among men who have sex with men and their female partners. In Dakar, for example, men who have sex with men have reported experiencing widespread stigma and violence (Niang et al., 2003), while in a study in Nairobi, one in four men who have sex with men said they had been aggressed or humiliated in public in the previous 12 months. Other research has shown that men who had been subjected to physical and other violence were less likely to use condoms during anal sex (Onyanga-Ouma et al., 2005).

Commercial sex still features prominently in Kenya's epidemic, and research suggests that prevention projects that result in increased condom use during paid sex could significantly reduce the number of new HIV infections in the country. For example, an estimated 8,000 female sex workers operate along the trans-Africa highway that links Mombassa and Kampala (in neighbouring Uganda). According to a recent study, condoms are used in about 77% of paid sex liaisons along this route, where prevalence among sex workers is estimated at around 50% and the annual number of sexual acts per female sex worker is estimated at 634 (with 129 different partners per year). Calculations indicate that, if condom use is increased to 90%, about 2,000-2,500 new HIV infections could be prevented

annually on that section of the highway (with a decline in HIV incidence from 1.3% to 0.4%) (Morris & Ferguson, 2006).

Meanwhile, other research has also highlighted the need to promote safer sex between sex workers and their regular partners. A study in Nyanza province has found that most sex workers have one or two regular partners, many of who are married to someone else. Although condom use with clients was relatively high (about 75%), it was infrequent with regular partners (less than 40%) – despite the fact that many of the latter were high-risk partners who also frequently had unprotected sex with other ‘regular’ sex worker partners, as well as with ‘casual’ or new sex workers, girlfriends or wives. Three quarters (75%) of the men were married (Voeten et al., 2007). Earlier studies in Benin and Ghana in 2000 and 2004 have also shown that regular partners of sex workers could pose a higher risk of HIV infection than clients (Lowndes et al., 2000; Cote et al., 2004). In one Ghana study, for example, HIV prevalence was 32% among boyfriends, compared with 13% among clients (Cote et al., 2004).

HIV prevention programmes for sex workers therefore should promote condom use in both regular and commercial sex partnerships (Voeten et al., 2007). Additionally, prevention programs should also encourage sex workers and their clients to use condoms during anal sex. A high proportion of surveyed sex workers in Meru reported having anal sex (41%) and more than one quarter (27%) of those women said they never used condoms when doing so (Schwandt et al., 2006). The risk of HIV transmission during unprotected anal sex is estimated to be at least 10 times higher than during vaginal sex (Royce et al., 1997).

HIV infection levels have declined also in the United Republic of Tanzania, where an estimated 6.5% [5.8%-7.2%] of adults (15 to 49 years) were living with HIV in 2005, down from just over 8% a decade earlier (UNAIDS, 2006; Somi et al, 2006). There is substantial regional variation in HIV prevalence – between Zanzibar and the mainland, and on the mainland itself. The most recent information shows HIV prevalence among antenatal clinic attendees in Zanzibar ranging from 0.7% in Unguja to 1.4% in Pemba (Salum et al., 2003), while in mainland Tanzania it was 8.7% among women using antenatal services in 2003-2004 (Swai et al., 2006).

On the mainland, a national population-based HIV survey in 2003-2004 found adult HIV prevalence to be almost twice the national average (of 7%) in Mbeya and Iringa (where it exceeded 13%), high in Dar Es Salaam (11%), and lowest in Kigoma and Manyara (2%) (Tanzania Commission for AIDS, National Bureau of Statistics & ORC Macro, 2005). However, a study during the same period in the remote rural Manyara and Singida regions (with relatively low HIV prevalence – under 2%) found patterns of sexual risk behaviour that could cause the HIV epidemic to escalate. Almost half the men surveyed had multiple partners

and almost 80% of men and women had never used a condom. Effective prevention measures will be needed to prevent wider spread of the virus in those areas (Yahya-Malima et al., 2007).

Recent national population-based surveys also suggest that behaviours that can protect against sexual transmission of HIV are waning in some sections of society. The percentage of married men and women who reported having had a 'casual' partner in the previous 12 months, for example, rose from 19% to 22% and from 5% to 9%, respectively, between 1996 and 2004-2005 (National Bureau of Statistics & ORC Macro, 2005; Bureau of Statistics & Macro International, 1997). Among young people (aged 15-24 years) surveyed in 2004-2005, 34% of young women and 83% of young men said they had engaged in higher-risk sex in the previous 12 months, on par with the 81% of young men and 37% of young women who reported similar behaviour in a 2003-2004 national survey. But in the 2004-2005 survey, fewer than half (46%) of the young men reported using a condom the last time they had higher-risk sex, as did only one third (32%) of the young women (down from 42% in the 2003-2004 survey). A similar reduction in condom use during higher-risk sex was evident among adult women (15-49 years) generally – from 38% to 28% over the same period. Among young and adult men, however, condom use levels during higher-risk sex remained steady in the two surveys. Age mixing, though, appears to be on the decrease. Only 6% of women in their late teens (15-19 years) reported in the 2004-2005 survey that they had had non-marital sex with someone 10 years or older during the previous year, compared with 9% in the 2003-2004 survey (National Bureau of Statistics & ORC Macro, 2005; Tanzania Commission for AIDS, National Bureau of Statistics & ORC Macro (2005).

Box 6.3

Injecting drug use: a growing factor in several sub-Saharan African HIV epidemics

Although a relatively new phenomenon in sub-Saharan Africa, injecting drug use is an increasingly important factor in several of the HIV epidemics in this region, including those in Kenya, Mauritius, South Africa and the United Republic of Tanzania. Available research shows that high-risk behaviour such as the sharing of injecting equipment and unprotected sex is commonplace within injecting drug user populations, and that HIV prevalence is high. In various studies, up to half of the injecting drug users tested in Mombassa and Nairobi (Kenya) were found to be HIV-positive, as were 26% in Zanzibar and 28% in South Africa (Ndetei, 2004; Odek-Ogunde, 2004).

The situation is most dramatic in Mauritius where, uniquely in sub-Saharan Africa, the HIV epidemic is driven primarily by injecting drug use. Unusually, HIV transmission initially occurred mainly through unprotected sex but transmission patterns have shifted dramatically since 2000 and most of the new reported HIV infections are now attributable to injecting drug use (Sulliman & Ameerberg, 2004).

In Mauritius, up to 80% of injecting drug users surveyed in a 2004 Rapid Situation Assessment had shared injecting equipment in the previous three months. In the same study, three quarters (75%) of sex workers reported having injecting drugs and only one quarter (23%) of them said they never shared injecting equipment. Of the injecting sex workers who had previously been tested for HIV, 13% were infected with the virus. Yet, two thirds (68%) of the sex workers said they had not consistently used condoms during the previous three months. One quarter (22%) of them said they never used condoms with clients, and three quarters (77%) said they did not use condoms with regular partners (Sulliman et al., 2004b).

In Kenya, about 80% of injecting drug users interviewed in Malindi, Mombassa and Nairobi said that they had used needles after someone else had used them. Amid such risk-taking, it was not surprising that, when tested, 50% of the injectors in Mombassa were found to be infected with HIV (Ndetei, 2004). In another study in Nairobi in, 53% of injecting drug users were found to be HIV-positive, two thirds (67%) of whom said they were sexually-active (Odek-Ogune, 2004).

In some urban areas on the Tanzanian mainland, injecting drug use has also emerged as a potentially important factor in the HIV epidemic (McCurdy et al., 2005). In Dar es Salaam, for example, 27% of 319 male and 58% of 98 female heroin injectors participating in a 2005-2006 study were found to be HIV-positive. There, too, the high HIV infection levels reflect a combination of unsafe injecting practices and risky sexual behaviour. All the injecting drug users claimed to be sexually active, with 85% of the female injectors saying that they traded sex for money. Two thirds (68%) of those women said they used condoms consistently during paid sex, but condom use seemed highly infrequent with regular partners, given that almost two thirds (62%) of the male and female injectors who had had sex in the previous week had not used condoms (Timpson et al., 2006).

Injecting drug use is an important risk factor also in Zanzibar's smaller HIV epidemic. HIV prevalence of 26% has been found among drug injectors on the islands of Unguja and Pemba in 2005, with almost half (46%) of the injectors, most of whom were males, saying that they shared injecting drug equipment. Seventeen percent of the injectors were also infected with syphilis, which indicates that unsafe sex is common, hence increasing the risk of HIV transmission into the general population. Almost all (86%) the female injectors and 8% of male injectors said they had exchanged sex for drugs (Dahoma et al., 2006).

Drug injecting is a growing phenomenon also in South Africa (Plüddemann et al., 2005), where heroin injecting has increased in recent years in the Gauteng and Mpumalanga provinces, while the trend appears to be fluctuating in the port city of Cape Town. In one attempt to measure the level of HIV among arrested injecting drug users in three cities (Durban, Pretoria and Cape Town), prevalence of 20% was found (Parry et al., 2006a), roughly similar to infection levels in the general population.

Adult national HIV prevalence in Burundi declined markedly from nearly 6% in the late 1990s to an estimated 3.3% [2.7-3.8%] in 2005 (UNAIDS, 2006). However, recent HIV surveillance among women seeking antenatal care suggests that the declining trend did not continue beyond 2005, when HIV infection levels started to increase again (sometimes substantially) at most surveillance sites. The highest prevalence was found in the capital, Bujumbura, where 18% (up from 13% in 2004) of adult and 16% (from 9% in 2004) of young (15-24 years) pregnant women tested HIV-positive in 2005, while in Butezi and Ijenda, HIV prevalence of less than 2% was found among antenatal clinic attendees in 2005 (Ministère de la Santé Publique [Burundi], 2005). It is too early to know whether the recent increase in HIV prevalence is an anomaly or whether it heralds a rising trend in infection levels. In addition, the inconsistent trends in recent infection levels among young pregnant women at various sites across the country make it difficult to understand recent trends in new HIV infections. It seems likely that the apparent decline in national HIV prevalence could be due mainly to the substantial drop in HIV prevalence observed up to 2004 in Bujumbura.

Adult national HIV prevalence in Rwanda was estimated to be 3.1% [2.7%-3.8%] in 2005 (UNAIDS, 2006). The 2005 antenatal clinic survey showed that 4.1% of pregnant women were HIV-infected, with prevalence highest in Kigali (13%), but on average about 5% in other urban areas and a little over 2% in rural areas. Substantial declines in HIV prevalence were observed in Rwamagana (from 13% to 4% between 1998 and 2005) and in Gikondo in the city of Kigali (14% to 8%) (Ministère de la santé [Rwanda], 2005). But, as in neighbouring Burundi, the declines in HIV prevalence among pregnant women in urban areas of Rwanda were strongest in the late 1990s and infection levels appeared to stabilize subsequently (Kayirangwa et al., 2006). In Kigali, for example, HIV prevalence in women attending antenatal clinics remained steady at 13% in three successive antenatal surveys between 2002 and 2005 (Ministère de la Santé [Rwanda], 2005). In rural areas, HIV prevalence has remained stable, but at much lower levels (Kayirangwa et al., 2006). Indeed, infection levels in pregnant women range from a low of 0.2% (at one rural clinic) to as high as 18% (at a clinic in Kigali).

Although still infrequent, condom use among young people appears to be increasing. The 3% of young women who, when surveyed in 2000, said they consistently used condoms, rose to 15% in a similar 2006 survey. Among their male counterparts, consistent condom use increased from 14% to 21% over the same period. In addition, fewer sexually-active young women reported having had two or more sexual partners in the previous 12 months (32% in 2000 versus 22% in 2006), although the corresponding proportions increased slightly for young men (41% versus 44%) (Centre de traitement et de recherché sur le SIDA, 2007).

HIV data collected in the 2005 national population-based survey showed HIV prevalence to be more than three times higher in urban than in rural areas (7.3%

versus 2.2%), with infection levels peaking in and around the capital Kigali (Institut National de la Statistique du Rwanda & ORC Macro, 2006). The same patterns were evident among young people (15-24 years), although HIV prevalence was relatively low in this age group, at about 1% nationally (Institut National de la Statistique du Rwanda & ORC Macro, 2006).

Among the recent improvements in Rwanda's HIV response is the expansion of services for preventing HIV transmission from mothers to children, which are now available in more than half of the country's health facilities. Compared with 2005, 1.5 times more women (636 000) agreed to be tested for HIV in 2006 (Ministry of Health [Rwanda], 2007). In addition, more male partners are attending prevention of mother-to-child transmission services with their wives and girlfriends. According to one study, the percentage of men doing so increased from 9% in 2003 to 74% at the end of 2006 (Ngendahimana et al., 2007). On the other hand, despite huge increases in the numbers of condoms distributed (Ministry of Health [Rwanda], 2006), consistent condom use by young people (Kayitesi et al., 2007) and during paid sex (Kabeja et al., 2007) remains low.

Until recently, understanding of the HIV epidemic in Ethiopia has been limited by the reliance on HIV information collected at antenatal clinics, which are used by a minority of pregnant women (about one in four pregnant women receive care at antenatal clinics) (Central Statistical Agency & ORC Macro, 2006). Recent, additional information derived from a national population-based and other HIV surveys has enabled a more complete picture to be drawn. The 2005 Demographic and Health Survey estimated national adult HIV prevalence to be 1.4%, with infection levels highest in the Gambela (6%) and Addis Ababa (4.7%) regions (Central Statistical Agency & ORC Macro, 2006). Both antenatal clinic data and population-based survey data indicate that HIV prevalence is at least five times higher in urban than in rural areas (Federal Ministry of Health [Ethiopia]; Central Statistical Agency & ORC Macro, 2006). Indeed, the epidemic shows great variation, with infection levels observed among pregnant women at some surveillance sites in 2003 up to 40 times higher than those observed at others. HIV prevalence ranged from 0.5% in rural Aira to 20% in urban Bahir Dar (Hladik et al., 2006).

Overall, the country's epidemic appears to be stable, with roughly equal numbers of Ethiopians newly acquiring HIV (an estimated 350 per day in 2005) and dying of AIDS (370 per day in 2005), according to recent modelling. Ethiopia's epidemic stabilized in urban areas in 1996-2000, after which HIV infection levels declined slowly, notably in parts of the capital, Addis Ababa. In rural Ethiopia, where the majority of the population resides, the epidemic has remained relatively stable since HIV prevalence peaked in 1999-2001 (Federal Ministry of Health [Ethiopia], 2006).

Knowledge about HIV and AIDS, however, remains relatively poor. Only 16% of adult women and 29% of adult men (and 21% and 33% of 15-24 year-old females and males, respectively) could demonstrate comprehensive knowledge of AIDS when surveyed in 2005.³ However, it appears that small proportions of adult Ethiopians engage in higher-risk sex. In the 2005 survey, only about 3% of adult women and 7% of adult men said they had had sexual intercourse with a non-cohabiting partner in the previous year. One in four (24%) of those women and one in two (52%) of those men said they had used a condom the last time they had higher-risk sex (Central Statistical Agency & ORC Macro, 2006).

In Eritrea, approximately 2.4% of women seeking antenatal care were found to be HIV-positive when tested in 2005 – the same prevalence found among antenatal clinic attendees in 2003. HIV infection levels in 2005 were highest in urban areas (3% versus 0.9% in rural areas), and ranged from as high as 7.4% in the port city of Assab in the far south, to 4.2% in the capital, Asmara, and 3.3% in Massawa, another port city. The epidemic appears to be most serious in the Southern Red Sea Zone, where about 6% of antenatal clinic attendees tested HIV-positive in 2005 (Ministry of Health [Eritrea], 2006).

In Somalia HIV surveys among women attending antenatal clinics have found HIV prevalence as high as 2.3% in Hargeisa (WHO, 2005). HIV knowledge appears to be very poor with only 8% of young (15-24 years) women and 13% of young men knowing how to prevent the transmission of HIV when surveyed in 2004 (UNICEF, 2004).

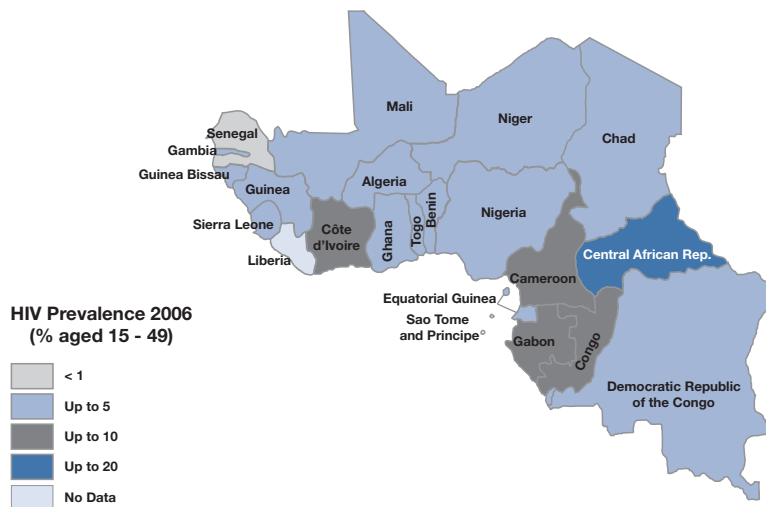
West and Central Africa

In most of the comparatively smaller epidemics in West and Central Africa, adult national HIV prevalence has remained stable overall. However, signs of declining HIV prevalence are evident in an increasing number of countries (notably Côte d'Ivoire, Mali and urban Burkina Faso). The available evidence also points to the ongoing centrality of unprotected paid sex in most of the epidemics in this region. Unfortunately, in several countries (including Cameroon, Central African Republic, Liberia and Sierra Leone), HIV surveillance is either too inadequate or too recent to allow for accurate assessments of epidemic trends at this stage. In others (including the Democratic Republic of the Congo, Gabon and Togo), improved HIV surveillance activities are enabling a more precise understanding of their respective epidemics.

³ Respondent knew that a condom at every sexual intercourse and having just one uninfected and faithful partner can reduce the risk of acquiring HIV, and knew that a healthy-looking person could be HIV-infected, and rejects the two most common local misconceptions about HIV transmission.

Figure 6.6

HIV prevalence from population-based surveys in countries in West and Central Africa, 2003–2006



Sources: various country surveys

Nigeria still has the largest epidemic in this subregion. Although the percentage of adults infected with HIV (an estimated 3.9% [2.3%–5.6%] in 2005) is smaller than many other sub-Saharan African countries (notably in East and southern Africa), the country's large population means that almost 3 million [1.7–4.2 million] Nigerians were living with HIV in 2005, second in number globally only to South Africa (UNAIDS, 2006). The national HIV prevalence among women attending antenatal clinics in Nigeria appears to be stable, but with large variations between different regions and states (Utulu & Lawoyin, 2007). State-wide HIV prevalence among pregnant women, for example, ranges from as low as 1.6% in Ekiti (in the west) to 8% in Akwa Ibom (in the south) and 10% in Benue in the south-east (Federal Ministry of Health [Nigeria], 2006).

In neighbouring Benin, sentinel surveys among pregnant women attending antenatal clinics indicate a relatively stable national epidemic, with HIV prevalence remaining around 2% since 2003. In only one area, Bourgou, did HIV prevalence decline significantly between 2003 and 2006. However, in a limited number of urban sites where data have been collected consistently since 2001, HIV prevalence declined slightly between 2001 and 2006 (from 4.1% to 3.8%) (Ministère de la Santé du Bénin, 2006). According to the 2006 Demographic and Health Survey, 1.2% of adults nationally were living with HIV; prevalence in women (1.5%) were almost twice as high as those in men (0.8%) (Institut National de la Statistique et de l'Analyse Economique & ORC Macro, 2007).

HIV prevalence in Togo, to the west of Benin, is among the highest in West Africa: 4.2% of pregnant women tested for HIV at antenatal clinics in 2006 were found to be HIV-positive, representing a slight decline in national infection levels. (In 2003, 4.8% of antenatal clinic attendees tested HIV-positive; this fell to 4.6% in 2004.) This trend, along with the steeper declines observed in the Maritime, Plateaux and Savanes regions suggests that the epidemic in Togo might have peaked around 2003. In the most recent antenatal clinic survey, the highest HIV infection levels were found in the capital, Lomé, and its surroundings, and in Sotouboua, where over 8% of pregnant women tested HIV-positive. Even in this small country, prevalence varies substantially and were under 2% in the Savanes region (Ministère de la Santé du Togo, 2007 & 2006).

Burkina Faso's epidemic continues to decline in urban areas. Approximately 2% [1.5%–2.5%] of adults were living with HIV in 2005 (UNAIDS, 2006). Among young pregnant women using antenatal services in urban areas, HIV prevalence fell by half in 2001–2003 (to a little below 2%), signalling a possible slowing of the epidemic (Présidence du Faso, 2005; Institut National de la Statistique et de la Démographie/ORC Macro, 2004). Mortality of those infected several years ago is likely to be a contributing factor to the decline. However, high prevalence is still being found in the cities of Bobo Dioulasso, Ouagadougou and Ouahigouya—where 3.8%, 5.4% and 3.6%, respectively, of adult women (aged 15–49 years) attending antenatal clinics were found to be HIV-positive in the 2005 round of sentinel surveillance (Ministère de la Santé du Burkina Faso, 2006).

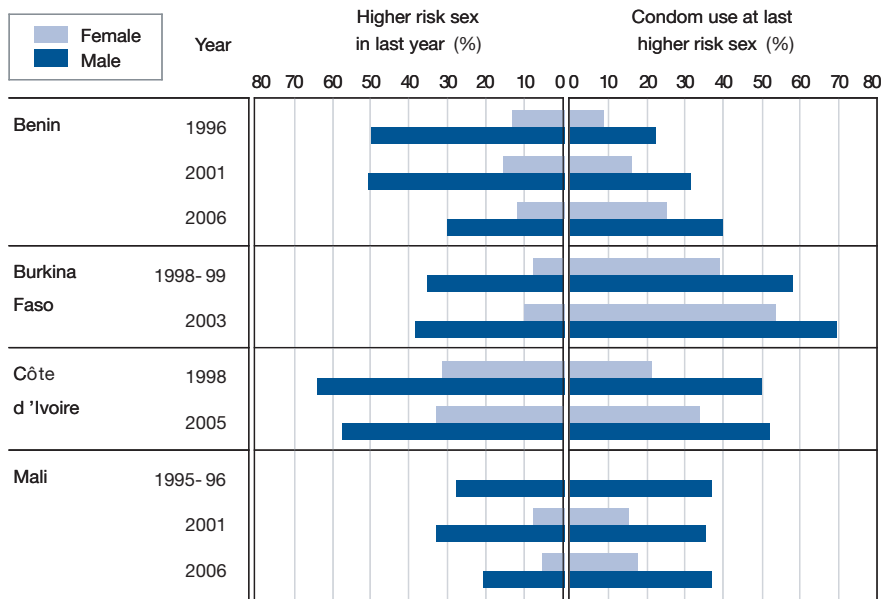
The most recent data for Mali, collected during a 2006 Demographic and Health Survey, also point to a possibly declining epidemic. Adult national HIV prevalence was an estimated 1.2%. As elsewhere in sub-Saharan Africa, women were more likely to be infected with HIV than men: HIV prevalence in adult women was 1.4%, compared with 0.9% in men (Ministère de la Santé du Mali/ORC Macro, 2007). Infection levels found in this latest survey are lower than those recorded in a similar survey in 2001, when adult national HIV prevalence was estimated at 1.7% (2% for women and 1.3% for men) (Cellule de Planification et de Statistique du Ministère de la Santé et al., 2002). Again, mortality would be a contributing factor for the decline in prevalence. Among pregnant women using public antenatal services, prevalence was 3.4% in 2005, similar to prevalence in previous years (Ministère de la Santé du Mali, 2005).

Unprotected paid sex appears to be a major contributing factor in Mali's epidemic. Among female sex workers, HIV infection levels remain high: more than one in three (35%) sex workers participating in a 2006 survey tested HIV-positive—higher than the prevalence of 29% and 32% found in 2000 and 2003 surveys, respectively. Prevalence was 50% among women who had been selling sex for more than six years, and 58% among those older than 40 years. Almost all the women (95%) said they used condoms the last time they sold sex to a client;

however, only half of them (51%) had used condoms the last time they had sex with a regular partner. Notably, 6% of travelling saleswomen were also found to be infected with HIV, as were 2.5% of the truck drivers who took part in the survey (Ministère de la Santé du Mali, 2006).

The epidemic has spread unevenly across Ghana, with prevalence among pregnant women attending antenatal clinics ranging from a low of 1.3% in the northern region to as high as 4.9% in the eastern region. Prevalence of 3.4% was found among pregnant women in Greater Accra (Ministry of Health [Ghana], 2007). Variable HIV infection trends are apparent in Ghana where, in 2006, an estimated 2.2% of adults were living with HIV (National AIDS Control Programme [Ghana], 2007). Median HIV prevalence among women attending antenatal clinics in Ghana has ranged between 2.3% and 3.6% between 2000 and 2006. The main exceptions are Adabraka and Cape Coast, where significant declines in HIV prevalence among antenatal clinic attendees occurred in 2003–2006. However, among consistently reporting sentinel sites in the country, HIV prevalence has remained around 3.4% between 2001 and 2006 (Ministry of Health [Ghana], 2007).

Figure 6.7
West Africa Behavioral Indicators, 1995–2006



Sources: (Benin) Institut National de la Statistique et de l'Analyse Économique; and, ORC Macro. DHS reports 1996, 2001 and 2006. (Burkina Faso) Institut National de la Statistique et de la Démographie; and ORC Macro. DHS Reports 1998–1999 and 2003. (Côte d'Ivoire) Institut National de la Statistique; and, ORC Macro. DHS reports 1998–1999 and 2006. (Mali) Cellule de Planification et de Statistique du Ministère de la Santé, Direction Nationale de la Statistique et de l'Informatique; and, ORC Macro. DHS reports 1995–1996, 2002 and 2007.

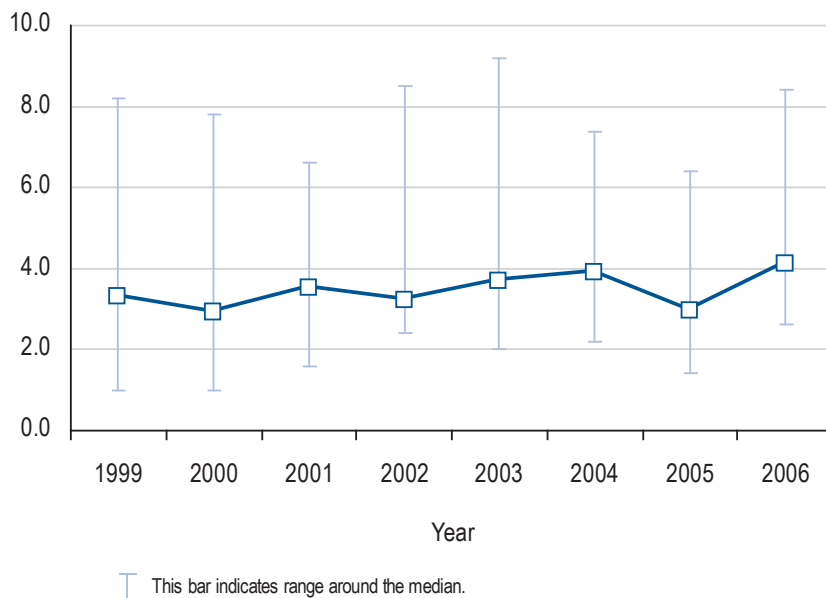
Box 6.4

Signs of a shift towards safer behaviour

Several West African countries present evidence of a shift towards behaviours that can limit the spread of HIV, as Figure 1.8 illustrates. In both Burkina Faso and Côte d'Ivoire, for example, condom use during sex with a non-regular partner increased substantially for women—from 39% to 58% between 1998/99 and 2003 in the former, and from 21% to 34% between 1998 and 2005 in the latter. Meanwhile, in both Benin and Mali, fewer men have been engaging in sex with a non-regular partner. That proportion decreased from 50% in 1996 to 30% in 2006 in Benin, and from 28% in 1995/96 to 21% in 2006 in Mali. Additionally, in Benin, those women and men who had sex with a non-regular partner were more likely to use condoms when doing so. Condom use in higher risk sex rose from 9% to 25% for women and from 22% to 40% for men between 1996 and 2006.

Figure 6.8

Median HIV prevalence among women (15–49 years) attending antenatal clinics in consistent sites in Ghana, 1999–2006



Sources: Sentinel surveillance reports, 1999–2006. (1) National AIDS/STI Control Programme
(2) Ghana Health Service

The lack of decline in prevalence could be explained by HIV infection trends among young people, mostly in urban areas. Women aged 15–24 years accounted for almost one third (30%) of all HIV infections recorded in the 2006 antenatal clinic survey, and prevalence in this age group rose from 1.9% in 2005 to 2.5% in 2006. This could reflect an increase in HIV incidence, since infections in that age

group are likely to have been acquired relatively recently. These data emphasize the need to strengthen prevention efforts that focus especially on younger Ghanaians (Ministry of Health [Ghana], 2007).

In Côte d'Ivoire, the latest Demographic and Health Survey estimated national adult HIV prevalence to be 4.7% (Institut National de la Statistique et Ministère de la Lutte contre le Sida Côte d'Ivoire & ORC Macro, 2006), which is lower than earlier estimates that were based primarily on HIV data collected at antenatal clinics in the provincial or district capitals. HIV surveillance among pregnant women suggests that prevalence is declining, at least in urban areas, where prevalence fell from 10% in 2001 to 6.9% in 2005 (Ministère de la Santé et de l'Hygiène Publique de la Côte d'Ivoire et al., 2007). As in Burkina Faso and Mali, mortality of people infected several years ago is a contributing factor to the decline in HIV prevalence

HIV prevalence is highest in Abidjan and in the south and centre-east regions of the country where between 5.5% and 6.1% of adults (15–49 years) were found to be HIV-positive. In both rural and urban areas, prevalence is more than twice as high for women (6.4%) as for men (2.9%). Among women aged 30–34 years, HIV prevalence was 15% (Institut National de la Statistique et Ministère de la Lutte contre le Sida Côte d'Ivoire & ORC Macro, 2006).

National adult HIV prevalence has remained stable in Senegal and was an estimated 0.9% [0.4%–1.5%] in 2005 (UNAIDS, 2006). However, infection levels of 2% and 2.2% among adults tested in a population-based survey have been found in the Kolda and Ziguinchor regions, respectively, in the south-west (Ndiaye & Ayad, 2006). Here, too, most HIV transmission seems still to be linked to unprotected paid sex: in Ziguinchor, for example, HIV prevalence as high as 30% has been found among female sex workers (Gomes do Espirito Santo et al., 2005).

Meanwhile, in the Gambia, divergent epidemic trends of HIV-1 and HIV-2 have been observed. A 16-year study among research clinic patients found that prevalence of HIV-1 rose from 4.2% in 1988–1991 to 18% in 2001–2003, while prevalence of HIV-2 declined from 7% to 4% over the same period. There was no apparent trend of dual infection of HIV-1 and HIV-2 in patients, with prevalence remaining around 1% during the same period (van der Loeff et al., 2006). The divergent trends may be explained by the lower sexual transmission rate of HIV-2, which is estimated to be one third that of HIV-1 (Gilbert et al., 2003). Recent national HIV data are not available, but prevalence of HIV-1 among pregnant women in the Gambia also increased from 0.7% to 1.0% between 1994 and 2000, while prevalence of HIV-2 decreased from 1.0% to 0.8% in the same period (van der Loeff et al., 2003).

Prevalence in Guinea is slightly higher than in neighbouring Senegal, with adult national HIV prevalence estimated at 1.5% [1.2%–1.8%] in 2005 (UNAIDS, 2006). Infection levels vary little across the country, and appear to have peaked at 2.1% in the capital, Conakry, according to a national population-based survey in 2005 (Direction Nationale de la Statistique & ORC Macro, 2006). However, the HIV surveillance system is weak and does not collect sufficient data from consistent sites to enable confident assessments of recent trend trends in the epidemic.

In Liberia, preliminary results from the 2007 Demographic and Health survey show adult (15–49 years old) national HIV prevalence of 1.5%, with infection levels varying from 2.5% in urban areas to 0.8% in rural areas. Adult prevalence was highest in the Monrovia region, at 2.6% (Liberia Institute of Statistics and Geo-Information Services & Macro International, 2007). Sentinel surveillance among antenatal clinic attendees in urban areas showed an average HIV prevalence of 5.7% in 2006. The high infection levels of 5.7% among young (15–24 years) pregnant women suggests that the epidemic in urban Liberia might still be on the rise (Ministry of Health and Social Welfare [Liberia], 2007). However, formal HIV surveillance began only recently and does not yet allow for an assessment of recent trends in the Liberian epidemic. Unfortunately current behaviour patterns seem to favour an ongoing epidemic. One in three (33%) sexually active women and one in two (52%) sexually active men who had sex with a non-regular partner in the previous year, and yet only one in seven (14%) of those women and one in four (25%) of the men said they used a condom during those encounters (Liberia Institute of Statistics and Geo-Information Services & Macro International, 2007).

More information is becoming available on the HIV epidemic in Sierra Leone, where the country's second national sentinel survey showed HIV prevalence of 4.1% among pregnant women attending (mostly urban) antenatal clinics in 2006. The epidemic is geographically varied, with infection levels under 2% in Kenema and Mattru Jong but exceeding 8% in Makeni and Pujehun. Compared to the HIV prevalence of 3% among pregnant women in a similar survey in 2003, the latest data suggest that the epidemic in Sierra Leone might be growing (Ministry of Health and Sanitation [Sierra Leone], 2007). A 2005 population-based survey found national adult prevalence of 1.5% (National AIDS Secretariat & Nimba Research Consultancy, 2005).

In Chad, a national HIV survey found that 3.3% of adults were living with HIV in 2005. The epidemic appears to be concentrated largely in urban areas, where average HIV prevalence was 7%, more than three times higher than in rural areas. HIV prevalence was highest in the capital, N'Djamena, where 8.3% of survey participants tested HIV-positive, and in Logone Occidental, where prevalence was 6.4%. The epidemic is being affected by changing levels of high-risk behaviour, conflict situations and substantial migration within and across country borders

(Institut National de la Statistique, des Etudes Economiques et Démographiques et Programme National de Lutte Contre le Sida, 2006). HIV prevalence is considerably lower in neighbouring Niger, where a 2006 Demographic and Health Survey estimated that 0.7% of adults were infected with HIV. Prevalence was highest in the Agadez and Diffa regions, at 1.6% and 1.7%, respectively (Institut National de la Statistique & Macro International Inc., 2007).

Cameroon has one of the largest HIV epidemics in this subregion, with almost half a million [460 000–560 000] adults living with HIV in 2005. Adult national prevalence was estimated at 5.4% [4.9%–5.9%] in 2005 (UNAIDS, 2006). A national population-based survey in 2004 showed large variation in prevalence, from 1.7% in the North and 2.0% in the Extreme North, to substantially higher levels of infection in the capital Yaoundé (8.3%) and the south-west (8%), east (8.6%) and north-west (8.7%) provinces (Institut National de la Statistique & ORC Macro, 2005).

Women, especially those in urban areas, have higher HIV prevalence. More than 8% of urban women (15–49 years) tested HIV-positive in the 2004 Demographic and Health Survey, almost twice the level of infection found among adult men in urban areas. Overall, for every 100 men infected with HIV, 170 women are infected. Among young women, a sevenfold increase in HIV prevalence occurs between ages 15–17 and 23–24 years—from 1.6% to 11.8% (Institut National de la Statistique & ORC Macro, 2005). Data from surveillance among pregnant women are lacking for recent years, making it difficult to assess trends in the epidemic.

In the Democratic Republic of the Congo it is estimated that as many as one million [560 000–1.5 million] people were living with HIV in 2005. Estimated adult national HIV prevalence was 3.2% [1.8%–4.9%] in the same year (UNAIDS, 2006). Armed conflict and poor transport infrastructure mean that parts of this large country have remained relatively isolated; partly as a consequence, there is variation in the trends in HIV infections between different places. Thus, while HIV prevalence among antenatal clinic attendees has remained relatively stable in the capital, Kinshasa (fluctuating between 3.8% and 4.2% between 1995 and 2005), prevalence has risen in the country's second-largest city, Lubumbashi (from 4.7% to 6.6% between 1997 and 2005), as well as in Mikalayi (from 0.6% to 2.2% between 1999 and 2005) (Kayembe et al., 2007). Prevalence is also high in the cities of Matadi, Kisangani and Mbandaka (where 6% of women using antenatal services were HIV-positive in 2005), as well as in Tshikapa (where prevalence was 8%) (Programme National de Lutte contre le SIDA, 2005).

Unprotected paid sex is an important factor in the Democratic Republic of the Congo's epidemic. About 12% of sex workers surveyed in five cities in 2005 were found to be HIV-positive, although infection levels varied substantially—from

1.4% in Kikwit to as high as 16% in Goma and 18% in Kananga (Ministère de la Santé, 2006). An earlier study in Kinshasa in 2003 found HIV prevalence of 14% among sex workers (Mpanya et al., 2004).

Adult national HIV prevalence in neighbouring Central African Republic is among the highest in all of West and Central Africa, and was estimated at 6.2% in a 2006 national population-based survey. Nationally, prevalence among women were almost twice as high as among men (7.8% versus 4.3%), and there is considerable regional variation in HIV prevalence rates. HIV prevalence was as high as 11% in Bamingui-Bangoran (in the north) and 14% in Haut-Mbomou (in the east of the country), while it was about 3% or lower in Basse-Kotto (in the south), Nana-Mambéré and Ouham-Pendé (both in the west) (Ministère de l'Economie, du Plan et de la Coopération internationale de la République centrafricaine, 2007).

Northern Africa

The HIV and AIDS epidemic in the countries of North Africa is distinctly different from sub-Saharan Africa and more similar to the Middle East. There is low prevalence of HIV but the potential exists for increased transmission in the immediate future. Sudan is an exception with an epidemic closer to the sub-Saharan pattern.

There have been recent improvements in epidemiological surveillance in some North African countries (including Morocco and Sudan). However, as a whole, surveillance in these areas remains limited, and HIV-related information on populations at higher risk of exposure to HIV is uneven. In particular, there is a lack of information in many countries on behavioural patterns and trends among most-at-risk population groups, such as injecting drug users, sex workers and men who have sex with men. In such instances it is difficult to obtain precise statistics or determine the levels and trends of HIV transmission (Obermeyer, 2006). Nevertheless, the HIV information available indicates that throughout the broader Middle East and North Africa region, an estimated 35,000 [16,000–65,000] people acquired HIV in 2007, bringing to 380,000 [270,000–500,000] the total number of people living with HIV in the region. As a result of AIDS-related illnesses, 25,000 [20,000–34,000] people died in 2007.

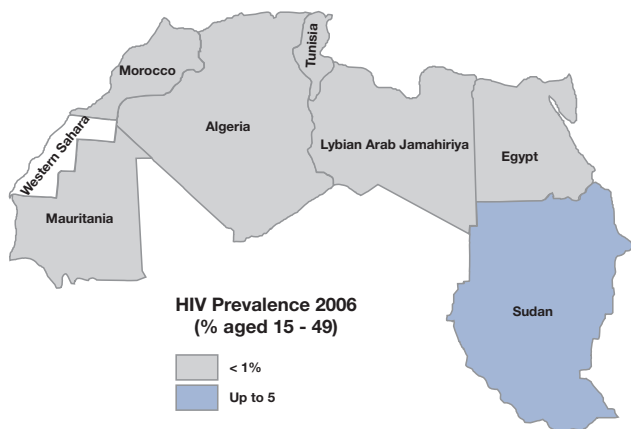
Although overall numbers of reported HIV cases remain small (except in Sudan—which is in most respects more akin to a sub-Saharan country), they have been increasing in several countries, partly due to expanded HIV testing efforts. Algeria, where reported HIV and AIDS cases doubled between 2001 and 2006, is one

such example (Ministry of Health Algeria, 2007). Across the region, most HIV infections are occurring in men and in urban areas—except in Sudan, where a more extensive epidemic is under way. In some countries, the proportion of HIV-positive women is growing as HIV spreads from (mostly male) injecting drug users and the clients of sex workers to their wives and girlfriends. In Morocco, for example, one third (33%) of women diagnosed with AIDS were married (Ministère de la Santé Maroc, 2007).

Figure 6.9

Low-level epidemics in northern Africa

Estimated adult (ages 15–49) HIV prevalence (%)



Data source: UNAIDS/WHO 2006

With national adult HIV prevalence estimated at 1.6% [0.8%–2.7%] in 2005 (UNAIDS, 2006), Sudan continues to have the largest epidemic in this region. Unsafe heterosexual intercourse is the most important factor in this epidemic. Among pregnant women using antenatal services, HIV prevalence of 2.2% has been found in White Nile State (Ministry of Health Sudan, 2006), and in Khartoum, the capital, it ranged from 0.3% to 0.5% (Ministry of Health Sudan, 2006). In a conflict-affected part of southern Sudan, recorded HIV prevalence among women attending antenatal clinics varied along the Ugandan border, from 0.8% in Rumbek town to 3% in Yei town (Kaiser, Kedamo & Lane, 2006). In other studies, more than 9% of men who have sex with men were found to be HIV-positive in Khartoum State (Elrashied, 2006).

The end of Sudan's north-south war in 2005 brought peace to southern Sudan for the first time in more than twenty years, which entailed an opening-up of areas formerly cut off by conflict and plans for an ambitious programme for the return of refugees and internally-displaced persons. Many southern Sudanese refugees have been living in east Africa including Ethiopia, Kenya and Uganda,

which have a higher HIV prevalence than Sudan. Population mobility, return and reintegration of refugees, and the demobilisation of former soldiers and guerrillas, could all facilitate the spread of HIV through the southern Sudanese population. In northern Sudan, the epidemic has been sustained at a low level, despite conflict, distress migration and urbanization. Data for HIV in many parts of northern Sudan including areas emerging from conflict (such as south Kordofan and Blue Nile) and suffering conflict (Darfur) are extremely scarce and there is concern that hidden epidemics may emerge under closer examination.

Unprotected paid sex appears to be an important factor in the HIV epidemics throughout the Middle East and North Africa. HIV prevalence well above the estimated adult national HIV prevalence have been found among female sex workers in Algeria (9% in Tamanrasset in 2004), and Morocco (2%–3% since 2001) (Fares et al., 2004; Ministère de la Santé Maroc, 2007).

As in many other regions, sex between men is officially forbidden, socially stigmatized, and under-researched. Nevertheless, the limited information available suggests that unprotected sex between men is a key factor in at least some of the epidemics in this region. For example, a recent study in Egypt found that 6% of men who have sex with men were HIV-positive (Ministry of Health Egypt et al., 2006), as were 9% of their counterparts in a Sudanese study (Elrashied, 2006). Almost half (42%) of the Egyptian men and more than half (56%) of the Sudanese men in those studies said that they had engaged in commercial sex. Yet condom use during paid sex was infrequent: about one in ten (9%) men in the Egyptian study and fewer than half of those in the Sudanese study said that they had used a condom the last time they bought sex (Ministry of Health Egypt et al., 2006; Elrashied, 2006). Alert to the implications of such risky behaviour, a number of other countries (including Algeria, Morocco and Tunisia) are now providing outreach services to prevent HIV transmission among men who have sex with men.

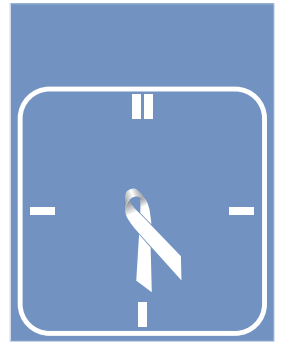
Elsewhere, exposure to contaminated drug injecting equipment is the main documented route of HIV transmission in the Libyan Arab Jamahiriya. Contaminated equipment is probably also the primary route of transmission in Tunisia, where more than 80% of the 186 HIV-positive patients who enrolled in a study at a Tunis hospital were injecting drug users (Kilani et al., 2003).

Exposure to non-sterile drug injecting equipment is common in several countries. Surveys suggest that 40%–50% of injecting drug users in Algeria (Mimouni and Remaoun, 2006) have used non-sterile equipment. In Morocco, almost three quarters (73%) of surveyed injecting drug users said that they had used non-sterile injecting equipment (Ministère de la Santé Maroc, 2007).

Unsafe sex and injecting drug use, which may overlap substantially, appear to be significant factors in HIV transmission in several countries. In various surveys, more than 40% of injecting drug users in Algeria and 36% in Egypt said that they had either bought or sold sex in the previous month (Ministère de l'Enseignement Supérieure et de la Recherche Algeria, UNAIDS & UNODC, 2006; Elshimi, Warner-Smith & Aon, 2004; Khoury & Aaraj, 2005). In most cases, condom use was infrequent. For example, only 14% of injecting drug users in Egypt and 6% of those in the Libyan Arab Jamahiriya said that they had used a condom in the previous 12 months. Similarly, in Morocco, 50% of surveyed male and 70% of surveyed female injecting drug users said that they had multiple sexual partners, yet only one in ten of the men and one in five of the women said that they had consistently used condoms (Elshimi, Warner-Smith & Aon, 2004; UNODC, 2005b; Ministère de la Santé Maroc, 2007).

Widespread male circumcision could act as a protective factor against HIV throughout the subregion, although not to the extent of meriting complacency (Obermeyer, 2006). Although female and male average ages of marriage are increasing in several countries, sexual health education and health services for young people are limited (DeJong et al., 2005). HIV-related stigma and discrimination remains vigorous in some countries and is hindering AIDS responses. Several other factors also exacerbate women's vulnerability to HIV, including marriage patterns and age differences between spouses, and sociocultural norms that complicate women's access to sexual health and HIV information (Obermeyer, 2006).

Urgently needed throughout North Africa are improved HIV surveillance systems and prevention programmes that focus on most-at-risk populations, together with political and institutional adjustments that will enable their effective implementation. Prevention efforts should include promoting and ensuring greater access to condoms, improving the availability and quality of sexual health education and services, and supporting the implementation of harm reduction programmes that can reduce HIV transmission within and beyond drug-using networks. All this presupposes improved HIV surveillance, including sentinel surveys among most-at-risk populations, which are essential for developing effective prevention and treatment strategies.



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