



World Health  
Organization



## HIV/AIDS Programme

# **TOWARDS UNIVERSAL ACCESS BY 2010**

How WHO is working with countries to scale-up  
HIV prevention, treatment, care and support





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# 1. INTRODUCTION

## 1.1 Background

In 2005, leaders of the G8 countries agreed to «work with WHO, UNAIDS and other international bodies to develop and implement a package for HIV prevention, treatment and care, with the aim of as close as possible to universal access to treatment for all those who need it by 2010». This goal was endorsed by United Nations Member States at the High-Level Plenary Meeting of the 60<sup>th</sup> Session of the United Nations General Assembly in September 2005. At the June 2006 General Assembly High Level Meeting on AIDS, United Nations Member States agreed to work towards the broad goal of “universal access to comprehensive prevention programmes, treatment, care and support” by 2010.

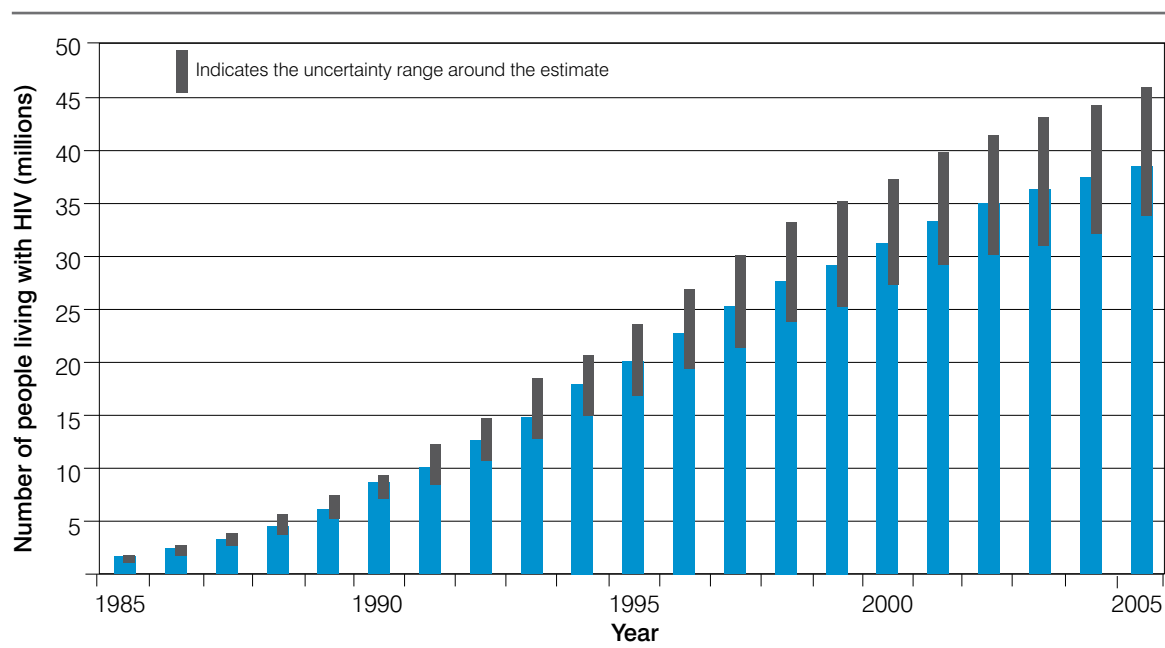
Working towards universal access is a very ambitious challenge for the international community, and will require the commitment and involvement of all stakeholders, including governments, donors, international agencies, researchers and affected communities. Among the most important priorities is the strengthening of health services so that they are able to provide a comprehensive range of HIV/AIDS services to all those who need them.

This document describes the contribution that the World Health Organization (WHO) will make, as the United Nations agency responsible for health, in working towards universal access to HIV prevention, treatment, care and support in the period 2006–2010. It proposes an evidence-based Model Essential Package of integrated health sector interventions for HIV/AIDS that WHO recommends be scaled up in countries, using a public health approach, and provides an overview of the strategic directions and priority intervention areas that will guide WHO’s technical work and support to its Member States as they work towards universal access over the next four years.

## 1.2 Twenty-five years of AIDS

Since the first cases were recorded in 1981, acquired immunodeficiency syndrome (AIDS) and its causative agent, the human immunodeficiency virus (HIV), have taken an enormous toll around the world. It is estimated that, at the end of 2005, 38.6 million people were living with HIV/AIDS. This includes nearly 4.1 million who were infected in 2005 alone. In the last 25 years, more than 25 million people have died of AIDS, including 2.8 million in 2005.

**Fig. 1. Estimated number of people living with HIV globally, 1985–2005**



Source: WHO/UNAIDS, 2006

About 95% of people with HIV/AIDS live in developing countries, and nearly two-thirds of them are in sub-Saharan Africa. In this region, where HIV is mainly spread through heterosexual sex, prevalence rates exceed 20% in the worst-affected countries, and the epidemic is disproportionately affecting young women. In the 15–24-year age group, three young women in sub-Saharan Africa are infected for every young man. Three-quarters of all women and nearly 90% of children with HIV/AIDS in the world live in this region.

HIV/AIDS epidemics in eastern Europe and east Asia are growing rapidly, notably in the largest countries - China, India and Russia - where commercial sex and injecting drug use are the key drivers. The diversity of epidemics between and within regions and countries highlights the need for a range of responses that can be adapted locally.

Global efforts to address HIV/AIDS have advanced in recent years. Greater international political commitment has been accompanied by increased financial resources through the Global Fund to Fight AIDS, TB and Malaria, the United States President's Emergency Plan For AIDS Relief (PEPFAR), continued funding through World Bank loan and grant instruments, increasing investments by bilateral donors and contributions from private foundations. As a result of the recommendations of the Global Task Team on Improving AIDS Coordination among Multilateral Institutions and International Donors, more concerted efforts are now being made to improve coordination and cooperation among United Nations partners, donors and governments so that the best use is made of these resources in countries.

Prevention efforts are beginning to bear fruit, with indications of behaviour change and declines in prevalence rates in a number of high-burden countries. Many countries—supported by the WHO/Joint United Nations Programme on HIV/AIDS (UNAIDS) '3 by 5' Initiative and the efforts of many other partners—have also made significant progress in expanding access to antiretroviral therapy.

Yet much more remains to be done if the goal of universal access is to be achieved. Global coverage of many of the key health sector interventions against HIV/AIDS remains low, and growth in the numbers of new infections and people in need of treatment continues to outpace the capacity of health services to respond. Global financial resources also fall short of what will be needed to achieve universal access, and the sustained political commitment needed to tackle AIDS over the long term is still lacking in some countries.

## 2. TOWARDS UNIVERSAL ACCESS IN THE HEALTH SECTOR

### 2.1 Overview

All sectors of society—from political leaders and government agencies to faith-based organizations (FBOs), community-based organizations (CBOs), businesses, teachers, trade unions, young people, parents and people living with HIV/AIDS—have contributions to make in building awareness about HIV/AIDS, helping to prevent the spread of HIV, providing care and support for those affected and mitigating the disease's impact. But it is the health sector that must play the lead role in coordinating the response to the epidemic at national and local levels, raising resources, administering health systems and delivering many of the most important interventions for HIV prevention, treatment, care and support through health services.

*The health sector is defined as “wide-ranging and encompassing organized public and private health services (including those for health promotion, disease prevention, diagnosis, treatment and care); health ministries; nongovernmental organizations; community groups; and professional associations; as well as institutions that directly input into the health-care system (e.g. the pharmaceutical industry, and teaching institutions).” –WHO Global Health Sector Strategy on HIV/AIDS 2003–2007*

In many low- and middle-income countries, the chronically under-resourced health sector faces severe shortages of financial and human resources, and health systems are struggling to cope with the impact of the HIV/AIDS epidemic. In some heavily affected countries in sub-Saharan Africa, people with HIV-related illnesses occupy more than 50% of hospital beds, and care and support services are overwhelmed by demand. At the same time as demand for health services increases, more health-care personnel are themselves dying or unable to work as a result of AIDS. Poor working conditions and low morale have also led many health workers to leave the sector or to migrate to countries offering better salaries and conditions.

Health infrastructure is also very weak in many countries. Inpatient and outpatient facilities, laboratory capacity and systems to procure, manage and distribute drugs, diagnostics and other essential commodities such as disposable gloves and sterile needles and syringes, must all be strengthened if universal access is to be achieved.

These constraints are contributing to low coverage of many of the major health-sector interventions against HIV/AIDS in many countries. Furthermore, stigma and discrimination against people living with HIV and most at-risk groups, including in health-care settings, continue to prevent people accessing the services they need.

### 2.2 Key challenges

The health sector faces significant challenges as well as new opportunities as it works to scale up key health-sector interventions towards the goal of universal access. These challenges are outlined below.

#### 2.2.1 Scaling up HIV testing and counselling

Household surveys in several high-burden countries (Botswana, Burkina Faso, Cameroon, Ghana, Kenya, Mozambique and Nigeria) have consistently shown that less than 10% of people living with HIV/AIDS are aware of their HIV status. Because HIV testing and counselling are the key entry point for individuals and their families to access HIV/AIDS prevention, treatment and care services, many more people will need to know their HIV status if universal access is to be achieved. This will require a major scale-up and diversification of HIV testing and counselling services (using rapid test technology), including both client-initiated and provider-initiated testing and counselling, as well as expanded coverage of and better tools for HIV testing in children and infants. Testing and counselling must be closely linked to prevention, treatment, care and support services. They must also be accompanied by concerted efforts to increase demand for these services (especially in most-at-risk communities); protect confidentiality and human rights; reduce stigma and discrimination; and support disclosure of HIV status.

## Testing: facts and figures

- Worldwide, only 12% of people who want to be tested are currently able to do so.
- In 2005, an estimated 0.4% of adults (15-49 years) in low- and middle-income countries received an HIV test through a routine offer of counselling and testing.
- In 2005, the reported testing rates were 0.1% in East Asia and the Pacific and South-East Asia; and 0.2% in North Africa and the Middle East. Testing utilization in 2005 was highest in sub-Saharan Africa (2.2%) and in Latin America (2.1%).

### 2.2.2 Preventing sexual transmission

Sexual transmission is a key driver of the HIV/AIDS epidemic, especially in sub-Saharan Africa. In many Asian countries, sex work is a primary driver of HIV transmission. Sexual transmission within serodiscordant couples currently accounts for 40-60% of sexual transmission in some high-burden countries. In Asia, the Caribbean and central Europe, the proportion of new infections attributable to unprotected sex between men is increasing, yet globally only 9% of men who have sex with men received any type of HIV prevention service in 2005.

The health sector needs to play a stronger role in preventing sexual transmission of HIV. It can do so by incorporating prevention initiatives into HIV/AIDS treatment and care services, increasing access to good-quality, affordable condoms and supporting 100% condom-use programmes; expanding services to treat sexually transmitted infections (STIs), and incorporating HIV/AIDS information and counselling into STI and reproductive health programmes as well as primary health-care services. The health sector has had limited success in addressing the needs of the most at-risk groups, and needs to make significant effort to ensure that services are accessible by and acceptable to them, including by strengthening links with community-based services.

## Prevention: facts and figures

- Coverage surveys indicate that, on average, a condom was used in only an estimated 9% of sex acts with a non-marital and non-co-habiting partner globally in 2005—a decline over coverage estimates for 2003.
- Untreated sexually transmitted infections increase the risk of HIV transmission. Genital ulcer diseases have been estimated to increase the risk of transmission of HIV 50–300-fold per episode of unprotected sexual intercourse.
- Nearly a million people acquire a sexually transmitted infection, including HIV, every day. Some 80–90% of the global burden of sexually transmitted infections occurs in the developing world where there is limited or no access to STI diagnostics.
- Thirty-three per cent of sex workers were covered by outreach prevention programmes in 2005.
- Cambodia launched a 100% condom use programme in 1998. Rates of condom use among brothel-based sex workers increased from 42% in 1997 to 96% in 2003. There was a corresponding decline in HIV prevalence among brothel-based sex workers from 42.6% in 1998 to 28.8% in 2002.
- Despite the UN General Assembly Declaration of Commitment target of 90% of people having knowledge about HIV by 2005, less than 50% of young people are knowledgeable. However, in 8 of 11 African countries surveyed, the proportion of young people having sex before age 15 has declined, and condom use has increased.

### **2.2.3 Prevention for people living with HIV/AIDS**

A major challenge for the health sector is to better address the prevention needs of people living with HIV/AIDS. Many people diagnosed in voluntary counselling and testing centres are lost to follow-up and only emerge again when they have advanced HIV disease. Nongovernmental organizations (NGOs) and community-based organizations (CBOs) have focused on health promotion for people living with HIV/AIDS, but strong links between these types of services and clinical care are not widespread.

The health sector has an important role to play in providing a wider range of health services and evidence-based interventions to assist people with HIV/AIDS to maximize their health; strengthen their immune systems; prevent opportunistic and sexually transmissible infections; reduce the harms associated with injecting drug use; and avoid passing HIV on to others. Such services may include information and counselling to prevent transmission to sexual partners; support for partner notification and beneficial disclosure; HIV testing and counselling for partners and children, and preventive care such as bed nets for malaria prevention; co-trimoxazole; safe water and screening; as well as preventive therapy for TB.

This will require additional training and human resources in health services; increased collaboration with networks of people living with HIV/AIDS and community-based services, as well as much more attention to issues of stigma and discrimination in health-care settings.

### **2.2.4 Preventing transmission in health-care settings**

It is estimated that globally, approximately 5% of new HIV infections annually occur through unsafe injection practices in health-care settings. Infection prevention guidelines exist in many countries, but their implementation is variable depending on available resources, available equipment and trained and motivated staff. Preventing HIV/AIDS transmission in health-care settings involves primary and secondary prevention measures.

Primary prevention includes standard precautions that benefit both patients and health-care workers, such as occupational health and safety, safe injections and safe medical procedures. Secondary prevention measures need to include first aid, counselling and support, HIV testing and, if necessary, post-exposure prophylaxis or treatment and care. More effort is needed to guarantee the safety of injections of all types, surgery, obstetrics and dental procedures, and medical waste disposal.

Measures to prevent tuberculosis (TB) transmission in the health-care setting are also important. These include rapid evaluation of suspected TB patients in outpatient settings; separation of infectious TB patients from other inpatients; cough hygiene for patients and environmental control methods such as good ventilation and ultraviolet light.

### **2.2.5 Ensuring blood safety**

In many countries, people still die due to an inadequate supply of blood and blood products. Every country has a common need to ensure the availability of adequate supplies of safe blood and blood products and their accessibility to all patients requiring transfusion through a nationally coordinated blood transfusion service; collection of blood only from voluntary unpaid blood donors at low risk of acquiring transfusion-transmissible infections, with stringent blood donor selection criteria; testing of all donated blood for transfusion-transmissible infections, blood groups and compatibility; and safe and appropriate clinical use of blood and blood products.

### **2.2.6 Reducing vulnerability**

A longer-term challenge for the health sector involves collaborating with other sectors to reduce the sexual transmission of HIV through structural interventions, for example, by promoting laws and policies that are consistent with prevention goals; promoting interventions to reduce vulnerability, particularly of women and girls, and supporting sex education for young people. The health sector will also have a central role to play in providing timely access to and guidance for the appropriate use of new prevention technologies, such as pre-exposure prophylaxis, microbicides and vaccines, when they become available, and male circumcision, if the results of one promising study are confirmed by other trials.

## New prevention technologies: facts and figures

- Results of a randomized controlled trial in South Africa have shown that male circumcision provides a 60-70% protective effect against HIV for men. Two further randomized trials are under way in Kenya and Uganda, and are expected to be completed in mid-2007. WHO and UNAIDS do not currently recommend male circumcision as a public health intervention against HIV, but will review this policy and provide appropriate guidance when the results of these trials become available.
- Currently, the HIV microbicide field has four candidate microbicides entering or in phase III trials, five in phase II and six in phase I.
- Various studies are being undertaken to evaluate the safety and efficacy of HIV pre-exposure prophylaxis (PrEP) for people with consistently high-risk behaviours.

### 2.2.7 Scaling up the prevention of mother-to-child transmission

Services to prevent mother-to-child HIV transmission (PMTCT) are important entry points for HIV/AIDS prevention, treatment and care services for women, their children and families. However, it is estimated that only about 1 in 10 pregnant women are offered services to prevent mother-to-child HIV transmission.

The health sector delivers a range of maternal, newborn and child health services that can provide a platform for the rapid scale-up of PMTCT programming. Comprehensive PMTCT programmes must include prevention of primary HIV infection in women of child-bearing age, prevention of unintended pregnancies among women with HIV/AIDS and HIV transmission from women with HIV/AIDS to their children, as well as provide care, treatment and support to women, their children and families. Interventions which need to be available to pregnant women include HIV testing and counselling in antenatal delivery and other health settings; couple counselling; promotion of dual protection, including condoms; infant feeding counselling and support; antiretroviral therapy as prophylaxis for MTCT prevention, and HIV/AIDS treatment and care.

Stronger linkages between PMTCT services and community-based support, family planning, STI and general health services are needed to ensure that women receive services that cover their wide range of health needs. In settings with high TB burden, TB screening, prevention and treatment also need to be accessible for pregnant women.

## Mother-to-child transmission: facts and figures

- In 2005, about 1 in 10 pregnant women in low- and middle-income countries were offered services to prevent transmission to their newborns - a modest increase over coverage in 2003, which stood at 7.6%. Less than 1 in 10 HIV positive pregnant women received prophylactic antiretroviral therapy.
- In Africa, HIV/AIDS was responsible for approximately 6.5% of deaths of children under five years of age in 2003.

### 2.2.8 Preventing HIV transmission through injecting drug use

An estimated 10% of all new HIV infections globally are related to injecting drug use, rising to over 30% if sub-Saharan Africa is excluded. Injecting drug use is the major mode of HIV transmission in eastern Europe and central Asia, where it accounts for over 70% of all HIV transmission. However, it is estimated that less than 5% of injecting drug users globally have access to effective HIV prevention, treatment and care services.

Although injecting drug users tend to be highly marginalized, there are many opportunities for both formal and informal health services to engage them in effective HIV prevention, particularly through collaboration with NGOs and peer networks that have a public health and human rights orientation. Essential elements of a comprehensive harm reduction response for injecting drug users include interventions for reducing HIV transmission, such as HIV risk reduction information, education and counselling; HIV testing and counselling; sterile needle and syringe programmes; safe collection and disposal of used syringes and needles; drug dependence treatment, particularly opioid substitution treatment; condom programming and STI treatment.

Clinical management of HIV/AIDS in injecting drug users is still poor in many countries. It needs to address coinfections and comorbidities, including antiretroviral therapy; prevention and management of opportunistic infections, particularly TB; pain management and palliative care; prevention and treatment of hepatitis B and C; alcohol and other drug dependence; and mental health. This comprehensive approach should also include outreach to both sexual and injecting partners of injecting drug users, many of whom are women.

The health sector can also contribute to a more supportive policy, legal and social environment by promoting policies that ensure equitable access to HIV services for drug users; supporting laws that do not compromise access to HIV services through criminalization and marginalization; and implementing campaigns to reduce stigma and discrimination, particularly in health services.

### **Injecting drug use: facts and figure**

- Among people who inject drugs, fewer than 20% receive HIV prevention services, with coverage of less than 10% reported in eastern Europe and central Asia, where drug use is the major driver of the HIV epidemic.
- An estimated 18% of injecting drug users globally were covered by harm reduction programmes in 2005.
- In eastern Europe and central Asia, injecting drug users account for over 70% of HIV cases but represent only about 24% of the people receiving antiretroviral therapy.

## 2.2.9 Scaling up treatment and care

The WHO/UNAIDS "3 by 5" Initiative helped to promote a steady increase in access to antiretroviral therapy in low- and middle-income countries between 2003 and 2005, with the number of people receiving treatment globally increasing three-fold over that period.

These encouraging global trends continue. By June 2006, an estimated 1 650 000 people living with HIV/AIDS were receiving treatment in low- and middle-income countries (Table 1), representing around 24% of the estimated 6.8 million people in need of treatment. Trends in treatment scale-up have been particularly encouraging in the region with the most HIV-infected people - sub-Saharan Africa - which is now estimated to have more than 1 million people on antiretroviral therapy, with coverage of 23%, compared to just 100 000 on treatment and 2% coverage at the end of 2003. Sixty-three per cent of all people now receiving antiretroviral treatment in low- and middle-income countries live in sub-Saharan Africa, compared to 25% in late 2003.

In east, south and south-east Asia, 235,000 people are now on treatment and coverage is estimated at 16%, up from 70 000 people on treatment at the end of 2003, and representing a more than three-fold increase. In Latin America and the Caribbean, the number of people receiving treatment has increased gradually to 345 000 people, up from 210 000 at the end of 2003. In this region, coverage now stands at around 75%, although some significant disparities in coverage remain between countries. In the low- and middle-income countries of Europe and central Asia and in north Africa and the Middle East, progress has been less significant. Some 24 000 people in Europe and central Asia are receiving treatment, compared to 15 000 at the end of 2003, with coverage now estimated at 13% of those in need. The region with the lowest estimated coverage (5%), is in north Africa and the Middle East, where 4 000 people were estimated to be receiving treatment at the end of June 2006, compared to 70 000 people who are in need.

**Table 1. Estimated number of people receiving antiretroviral therapy, people needing antiretroviral therapy, and percentage coverage in low- and middle-income countries according to region, December 2003–June 2006<sup>a</sup>**

Geographical region	Estimated number of people receiving antiretroviral therapy, June 2006 (low estimate–high estimate) <sup>b</sup>	Estimated number of people needing antiretroviral therapy, 2005 (low estimate–high estimate) <sup>a</sup>	Antiretroviral therapy coverage, June 2006 (%)	Estimated number of people receiving antiretroviral therapy, December 2005 (low estimate–high estimate) <sup>b</sup>	Estimated number of people receiving antiretroviral therapy, December 2003 (low estimate–high estimate) <sup>b</sup>
Sub-Saharan Africa	1 040 000 [930 000–1 150 000]	4 600 000 [4 000 000–5 400 000]	23%	810 000 [730 000–890 000]	100 000 [75 000–125 000]
Latin America and the Caribbean	345 000 [260 000–430 000]	460 000 [350 000–600 000]	75%	315 000 [295 000–335 000]	210 000 [160 000–260 000]
East, South and South-East Asia	235 000 [180 000–290 000]	1 440 000 [970 000–2 000 000]	16%	180 000 [150 000–210 000]	70 000 [52 000–88 000]
Europe and Central Asia	24 000 [23 000–25 000]	190 000 [130 000–260 000]	13%	21 000 [20 000–22 000]	15 000 [11 000–19 000]
North Africa and the Middle East	4 000 [3 000–5 000]	75 000 [43 000–120 000]	5%	4 000 [3 000–5 000]	1 000 [750–1250]
<b>TOTAL</b>	<b>1 650 000</b> <b>[1 400 000–1 900 000]</b>	<b>6 800 000</b> <b>[5 800 000–8 000 000]</b>	<b>24%</b>	<b>1 330 000</b> <b>[1 200 000–1 460 000]</b>	<b>400 000</b> <b>[300 000–500 000]</b>

Some numbers do not add up due to rounding

a For an explanation of the methods used, see *Progress on global access to HIV antiretroviral therapy: a report on "3 by 5" and beyond*, WHO and UNAIDS, 2006.

b Data on children - when available - are included

Despite this encouraging progress, approximately three-quarters of those in need of treatment worldwide still do not have access to it, and although there is presently no reported, systematic gender bias in access to treatment globally, children and vulnerable populations (such as injecting drug users) are significantly under-served. The health sector must continue to drive scale-up towards universal access to treatment through planning, delivering, monitoring and evaluating HIV treatment, care and support services, organizing health services and ensuring equity and quality of programmes. Current priorities include updating national treatment guidelines to include the most appropriate recommendations for first- and second-line regimens; developing models of delivery that ensure equity, including reaching those most at risk; maintaining continuous supplies of drugs and diagnostics and developing improved drug formulations for adults and children. Delivering treatment for displaced persons, refugees and populations in conflict also remains a major challenge.

Where antiretroviral therapy is widely available, the incidence of opportunistic infections and associated morbidity and mortality are greatly reduced. However, patients failing treatment or without access to it need prophylaxis and treatment for a wide range of opportunistic infections that may be encountered. Access to many of these drugs is still poor. For example, it is estimated that globally only 4% of adults and 1% of children infected with HIV have access to co-trimoxazole prophylaxis, an inexpensive and highly effective intervention for the prevention of *pneumocystis jiroveci* pneumonia and some bacterial infections. Drugs for preventing and treating many other common opportunistic infections remain unaffordable or are not routinely available due to weaknesses in procurement and supply systems.

Tuberculosis (TB) is one of the leading causes of HIV-related deaths and morbidity. Despite some progress in recent years, TB continues to fuel the HIV epidemic, especially in Africa, and the lack of TB diagnostic tests—particularly for sputum smear-negative and extrapulmonary TB—as well as poor laboratory infrastructure, delay diagnosis of TB and commencement of TB treatment. TB programmes can be important partners in helping to accelerate the decentralization of HIV treatment and care down to the primary care level. Much more attention to joint planning, collaboration between TB and HIV programmes and integration of TB and HIV services are needed in many countries with high rates of coinfection.

Managing the broad range of opportunistic infections and other comorbidities experienced by people living with HIV/AIDS requires an integrated and coordinated response from a wide range of health services. Clinical guidelines need to incorporate the latest recommendations for prophylaxis and treatment of opportunistic infections. Although most coinfections and comorbidities can be managed at primary care level, complicated cases may need to be referred to specialist services addressing such areas as TB, viral hepatitis (which affects up to 90% of injecting drug users), respiratory medicine, oral health, mental health, drug dependence, neurology, gastroenterology, oncology and gynaecology. Planning for the expansion of HIV/AIDS services needs to ensure that the capacity of these associated services, including community-based services, is also expanded.

Other aspects of care also require closer attention. Few HIV/AIDS treatment and care programmes include nutritional support as a core intervention, yet adequate nutrition is essential to maintaining the immune system and ensuring optimal benefits from the use of antiretroviral therapy and other medicines. Whether antiretroviral therapy is available or not, there is a need to provide comprehensive palliative and end-of-life care for people living with HIV/AIDS, including proper management of underlying or associated chronic health conditions and psychosocial support. Pain management in particular remains a major challenge in most countries due to poor access to opioid analgesics and negative health worker attitudes towards prescribing analgesia.

## Treatment and care: facts and figures

- At the end of 2005, an estimated 5,100 sites were providing antiretroviral treatment in the public sector in low- and middle-income countries.
- In countries with high HIV prevalence, up to 80% of people with TB also test positive for HIV.
- In 2005, an estimated 39% of those in need of home-based HIV/AIDS care received it.

### 2.2.10 Overcoming major health systems constraints

Weak drug procurement and supply management systems, poor laboratory infrastructure and severe human resource shortages are among the major health systems constraints that need to be tackled in countries working towards universal access.

Procurement and supply management have been consistently identified as one of the main health systems bottlenecks. Even where treatment is available, many countries face the threat of stock-outs due to weaknesses in drug supply chains. These weaknesses include limited procurement systems, warehousing and facility storage and transport infrastructure; weak regulatory and management capacity, and poor information systems. In many cases, these are the result of years of neglect and under-investment. Universal access will require access to a much larger range of health commodities, which will place further strain on procurement and supply systems. The continued high prices of many antiretroviral drugs, particularly second-line drug regimens, the limited range of prequalified antiretroviral drugs and suitable formulations, and complicated national drug registration systems further compromise access.

Scale-up to date has highlighted major weaknesses in such areas of laboratory capacity as determination of CD4 cell counts, viral load and the diagnosis of opportunistic infections. HIV tests of assured quality and validated testing algorithms to diagnose HIV are also critical to HIV diagnosis, screening of donated blood, the prevention of mother-to-child transmission and HIV surveillance. Many countries currently face important decisions about the choice of technologies, maintenance agreements, the level of decentralization of laboratory services within the health system, training of laboratory staff, internal and external quality management mechanisms and mechanisms to ensure consistent supplies of reagents, kits and other consumables. Harmonization of technologies is also important for cost-effectiveness, training and quality assurance. Quality management systems need to reach each setting where laboratory testing is taking place.

Scarce human resources for health are a major barrier to scaling up the HIV/AIDS response. In many countries, HIV/AIDS is depleting an already-limited health workforce. Planning and funding the increased human resources needed for universal access must address challenges such as curricula development, occupational health and safety, training, health worker needs for prevention, treatment, care and support, task shifting and health worker migration.

Despite the constraints experienced by many countries, experience from "3 by 5" has highlighted the potential of HIV/AIDS interventions to strengthen health systems and enhance the delivery of services for other diseases. Systems to procure antiretroviral drugs and medicines for opportunistic infections, for example, can be designed in such a way that they strengthen other essential medicine supply systems. Addressing the workforce depletion issues that arise from HIV burden can help to strengthen the entire health workforce. Developing health sector management capacity at the district level ensures that additional resources provided for HIV/AIDS services can help to build local primary health-care services. Above all, the strong leadership of the health sector on universal access can contribute to more equitable access to health services for all, regardless of gender, age, risk behaviours, socioeconomic status, or other factors.

## Human resources: facts and figures

- The World Bank has estimated that a country with 15% adult HIV prevalence rate can expect to lose up to 3.3% of its health care providers from AIDS annually.
- WHO estimates that there are currently 57 countries with critical shortages of health workers equivalent to a global deficit of 2.4 million doctors, nurses and midwives. The proportional shortfalls are greatest in sub-Saharan Africa, while numerical deficits are very large in south-east Asia because of its population size.
- Botswana lost approximately 17% of its health-care workforce due to AIDS between 1999 and 2005.

### 2.2.11 Sustainable financing

Scaling up to achieve universal access will require a major increase in long-term financial investments to ensure sustainability and quality of HIV/AIDS services in countries. Globally, HIV/AIDS funding needs for 2007 are estimated to be US\$ 18.1 billion, but it is currently estimated that only US\$ 10 billion will be available.

External financial support will continue to play a critical role in financing HIV/AIDS responses in low- and middle-income countries, but domestic funding must also increase if long-term sustainability and predictability of funding are to be guaranteed. In recent years, there has been an increase in domestic spending on HIV/AIDS in many low- and middle-income countries, reaching approximately US\$ 2.5 billion in 2005. Ministries of health and finance face the challenge of having enough money in HIV/AIDS and general health budgets to support activities towards achieving universal access, allocating that money so that it responds to local needs, making decisions about the relative contribution of individual patients and insurance or pooled funds, and deciding which technologies and services to make available, all without undermining the effectiveness of or access to programmes.

Implementation of the Global Task Team recommendations concerning better coordination of donor funding and technical support, including the pooling of financial assistance to countries and closer integration of resource allocation for health and development, as well as new financial mechanisms such as the airline solidarity contribution and the International Finance Facility, will also affect the resources available to the health sector for scaling up HIV/AIDS programmes.

## Financing : facts and figures

- UNAIDS projections suggest that there was an estimated US\$ 8.3 billion available for the AIDS response in low- and middle-income countries in 2005. Bilateral and multilateral funds accounted for 68.8% of this amount.
- Existing pledges, commitments and trends suggest that available funds will be US\$ 8.9 billion in 2006 and approximately US\$ 10 billion in 2007.
- Funding from domestic sources is expected to increase from US\$ 2.5 billion in 2005 to US\$ 2.8 billion in 2006 and US\$ 3 billion in 2007. It is estimated that over the next three years, the largest proportion of domestic spending will be in Latin America and the Caribbean.
- In some upper-middle-income countries, governments cover from 80% to 95% of HIV-related costs through public health and social security programmes. In low- and lower-middle-income countries, governments and external donors together cover 25% to 50% of costs. The remainder is covered by out-of-pocket spending by patients and their families.

### 2.2.12 Monitoring the epidemic and the health sector response

Without comprehensive surveillance, countries cannot appropriately estimate the burden of HIV/AIDS and STIs or track the impact of interventions. Yet the quality of surveillance systems varies widely and some countries still struggle to collect the most basic data.

Surveillance information is usually collected by or with the involvement of the health sector, including through data collected in health facilities. In addition, population-based serological and behavioural surveys are usually planned and conducted with health sector involvement. Continued improvement of HIV and STI surveillance is needed to allow better data to be collected.

The scale-up of antiretroviral therapy programmes will inevitably be accompanied by the emergence of some amount of HIV drug resistance (HIVDR). The public health consequences of widespread HIVDR are not well understood, but could include failure of treatment or of the efficacy of antiretroviral drugs in preventing mother-to-child transmission. Likewise, treatment-related drug toxicity and side effects may significantly compromise the success and acceptability of treatment. Most countries have yet to put in place national mechanisms to address HIVDR or collect HIVDR data using standardized methods in order to determine treatment selection and guide policy. Similarly, efforts to monitor treatment side effects and drug toxicity are currently restricted to research cohorts and will need to be integrated into routine patient monitoring systems.

The health sector's progress in working towards universal access will need to be periodically and carefully assessed. Setting country targets for key interventions, and tracking progress through monitoring and evaluation, are critical to planning, decision-making and accountability. Countries need to implement comprehensive national monitoring and evaluation systems that can evaluate various interventions and approaches and measure their availability, coverage and impact. The monitoring of morbidity, survival, quality of services and treatment adherence is also important.

Of the 126 countries reporting to UNAIDS on their national HIV/AIDS responses for the 2006 *Report on the Global AIDS Epidemic*, 50% reported that they had a national monitoring and evaluation framework and plan. One of the major bottlenecks in implementation of large country grants is a weak monitoring and evaluation system, with unclear indicators, inappropriate data collection systems, lack of capacity at the local level to collect data and inadequate capacity for data analysis. Current priorities include developing monitoring and evaluation plans and guidelines related to the health sector; implementing standardized data collection tools such as registers and patient cards; acquiring the equipment necessary to store and manage data; and building data management capacity.

Operational research also plays an important role in assessing different approaches and drawing lessons about best practice. Countries and international organizations are now increasingly recognizing the importance of systematically incorporating operational research into the scale-up of HIV programmes. Priority research issues for the health sector include assessing new models of service delivery for vulnerable and high-risk groups; assessing new approaches to HIV testing and counselling; the impact of treatment scale-up in the context of primary and chronic care disease management; simultaneous efforts to scale-up treatment and accelerate prevention; and the impact on health systems of scaling up HIV/AIDS interventions.

### 3. A PUBLIC HEALTH APPROACH TO SCALING UP HIV/AIDS SERVICES

To date, efforts to scale up HIV/AIDS programmes have involved a variety of different service delivery models, guidelines and tools for multiple HIV/AIDS interventions. Countries seeking to scale up HIV/AIDS health services to achieve universal access will benefit by adopting a service delivery model that brings together the best of these approaches and helps to compensate for the significant health systems challenges that many of them face. Such a model should ideally be standardized as much as possible so that it can meet the needs of large numbers of people and be implemented in a wide range of settings.

Accordingly, WHO promotes a *public health approach* to the delivery of health services for HIV/AIDS. A public health approach is one directed to addressing the health needs of a population, or the collective health status of the people, rather than just individuals. A public health approach involves a collaborative effort by all parts of the health sector, working to ensure the well-being of society through comprehensive prevention, treatment, care and support.

The public health approach promoted by WHO draws upon the successful experiences of several countries to date in scaling up HIV/AIDS services and is based upon the principles of simplification, standardization, decentralization, equity and patient and community participation. The major operational elements of this approach are:

- **Identifying an essential package of integrated HIV prevention, treatment, care and support interventions to be delivered by the health sector**

An essential package is an identified set of integrated interventions that are deemed necessary, based on a country's needs and epidemiology, in order to mount an effective health sector response to HIV/AIDS. WHO has developed a Model Essential Package of integrated health sector interventions for HIV/AIDS to guide countries and provides a wide range of tools and technical support to assist with its implementation. The Model Essential Package is described in more detail in Section 4.

- **Decentralization and integration of health services**

Decentralization of HIV/AIDS services to the health facility and community level, and their integration with other priority health interventions, are key challenges for achieving universal access. In many countries, people with HIV/AIDS require multiple interventions such as services for TB, substance use, pregnancy and child health. These services are often managed by different programmes and personnel, leading to inefficient use of resources and increased burden on the patient. Integration of these services at the health facility level, with standardized protocols and training for health workers, enables more effective co-management of patients and promotes family-based care that addresses the needs of adults, adolescents and children.

- **Standardization and simplification of protocols and procedures**

A public health approach involves the standardization and simplification of service delivery, to the maximum extent possible, to enable the broadest possible coverage of the population across a wide range of settings. Standardized protocols for HIV testing and counselling, prevention, treatment and clinical management, as well as for the management of opportunistic infections such as TB, enable the rapid and uniform training of health-care providers and simplify the procurement and distribution logistics for drugs, diagnostics and other commodities.

In the case of antiretroviral therapy, WHO recommends that protocols employ standardized first- and second-line drug regimens. Such an approach facilitates the rapid scale-up of antiretroviral therapy in resource-limited settings by enabling as many people as possible to receive treatment. The use of quality-assured antiretroviral drugs in fixed-dose combinations or as blister packs is another important component of the public health approach, since this promotes better adherence, thus limiting the potential emergence of drug resistance, and facilitates storage and distribution logistics.

Standardized patient tracking systems, including registers and patient data cards, are important to facilitate the collection of data at the health-centre level and the analysis and comparison of data at national level and across settings.

The public health approach also assumes that, while laboratory infrastructure needs to be built to achieve universal access, limited laboratory infrastructure should not act as a barrier to the scale-up of HIV/AIDS services. For example, in situations where only a limited number of HIV-antibody tests needs to be carried out and immediate test results offer an advantage, WHO recommends the use of simple, rapid HIV tests, which can be performed by non-laboratory staff, such as trained counsellors. Where CD4 cell count and viral load testing are unavailable, simple tools such as baseline clinical assessment, haemoglobin measurement and total lymphocyte count can be used as markers of disease progression. To support these approaches at the health facility and community level, WHO recommends the progressive scaling up of more sophisticated laboratory infrastructure in regional referral centres and district hospitals.

- **A "clinical team" approach to patient management, including task-shifting**

A clinical team approach helps to address human resource limitations in the health sector through "task-shifting" the routine aspects of patient management and follow-up from specialist physicians to doctors and medical officers, and from doctors and medical officers to other cadres of health workers. With this approach, doctors and medical officers supervise the other staff and provide specialist support for complex cases. Standardized protocols enable nurses to be trained in many of the routine aspects of patient management, including dispensing medication. Nurses, trained community health workers and people living with HIV/AIDS acting as members of a clinical team can also conduct HIV testing, counselling and adherence support.

The clinical team approach promotes increased service coverage through decentralization of many services to the health centre and community level, and facilitates links and referrals between different levels of health services so that district hospitals, health centres, the community and non-state providers are all able to act as entry points for HIV/AIDS prevention, treatment, care and support.

- **Strengthening HIV prevention in health-care settings**

A public health approach to HIV/AIDS service delivery needs to be balanced and comprehensive, recognizing that in addition to providing treatment, care and support, health services must play a stronger role in HIV prevention. They can do this by scaling up HIV testing and counselling and expanding services for the prevention of mother-to-child HIV transmission; improving access to prevention services for the most-at-risk populations and being more vigilant about limiting HIV transmission in health-care settings. Importantly, health services need to more effectively address the often-neglected prevention needs of people living with HIV/AIDS as a routine component of care and support.

- **Expansion of HIV testing through the routine recommendation of HIV testing in settings with high HIV prevalence**

In several high-prevalence settings, it is estimated that only 10% of people living with HIV know their HIV status. Limited access to and uptake of voluntary counselling and testing prevents many people from accessing the prevention, treatment and care services they need. Currently, many people with HIV are only offered HIV testing and counselling when they present in an advanced stage of disease, often with severe opportunistic infections. When an HIV diagnosis is made earlier in the course of the disease, appropriately timed interventions can lead to slower clinical progression and reduced mortality. Even in a situation where antiretroviral therapy is not yet available or affordable, use of co-trimoxazole can extend the lifespan of a person living with HIV by several months. Timely diagnosis of HIV infection can also enable people to protect their partners and families. In high-prevalence settings, provider-initiated testing and counselling enables more people to act upon knowledge of HIV status. Benefits of provider-initiated HIV testing and counselling for the wider community include more opportunities to reduce HIV transmission and improve HIV epidemiological data.

- **Community mobilization to promote HIV testing and counselling, promote prevention, prepare communities for treatment and provide adherence support**

The community sector complements formal health services by playing a key role in HIV/AIDS education and prevention, especially in reaching most at-risk populations; creating demand for HIV/AIDS services; ensuring that HIV/AIDS services are acceptable and of good quality; preparing communities for treatment through information and education; supporting adherence to medicine and providing other forms of prevention, care and support. These roles need to be reinforced as much as possible through providing adequate resources for community-health activities and building strong links between health services and community organizations.

- **Population-based HIV drug resistance surveillance and pharmacovigilance**

Collection and publishing of national HIV drug resistance data are important to inform national and global policy on the public health consequences of drug resistance. WHO recommends that countries establish national HIV drug resistance surveillance and monitoring working groups to coordinate this effort, using the global network of supranational, regional, and national HIV drug resistance testing laboratories that WHO and other partners in the HIV Drug Resistance Surveillance Network (HIVResNet) are establishing. Mechanisms to collect population-level data on toxicities and treatment outcomes will also become increasingly important as more people are on treatment for longer periods of time.

- **Free antiretroviral therapy at the point of service delivery**

User fees are applied to antiretroviral therapy and care in many settings, even if treatment is subsidized. However, it has been shown that (i) user fees decrease adherence, thus undermining antiretroviral therapy sustainability; (ii) both collection of user fees based on the ability to pay and exemption mechanisms for the poor have proven inefficient, thus undermining uptake and equity of access; and (iii) user fees impoverish households. Therefore, countries implementing a public health approach to scale-up are being advised to adopt a policy of free access at the point of service delivery to basic HIV services, including consultation fees, HIV testing and antiretroviral therapy.

Faced with national budget constraints and lack of guaranteed long-term international funding, some highly-affected countries find it difficult to abolish user fees and raise concerns related to the sustainability of free access policies. Assisting countries to resolve this dilemma by the development of alternative funding mechanisms is an urgent priority for international donors and technical agencies.

## 4. DEFINING AN ESSENTIAL PACKAGE OF HEALTH SECTOR INTERVENTIONS FOR HIV/AIDS

### 4.1 The Model Essential Package

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Defining and implementing an essential package of HIV/AIDS interventions is a key component of the public health approach that WHO promotes for countries working towards the goal of universal access. An essential package is a set of interventions deemed necessary, based on a country's needs and epidemiology, to mount an effective and comprehensive health sector response to HIV/AIDS. While the specific approach to achieving universal access will differ from country to country, all countries will need to define an essential package of prevention, treatment, care and support interventions that they intend to make universally available.

Achieving universal access in the health sector will mean that the essential package of integrated interventions selected is physically accessible, affordable and meets a minimum standard of quality.

Further to the request by G8 leaders in July 2005, WHO has worked with its partners to develop a Model Essential Package of integrated health sector interventions for HIV/AIDS (Table 2). The interventions are grouped according to whether they are optimally delivered in health facilities, community settings or through outreach activities. However, it is acknowledged that the actual mode of delivery will vary between different countries and health systems. The Model Essential Package also contains a fourth group of activities that are necessary at the national level to support delivery of interventions through health services.

The Model Essential Package is intended to be flexible and adaptable to a variety of service delivery approaches and in a range of epidemiological settings. For example, the way in which prevention interventions are targeted towards marginalized or vulnerable populations will have to be determined according to local epidemiological trends. However, implementing most of the interventions in the Model Essential Package will be appropriate in many countries working to mount a comprehensive health sector response to HIV/AIDS. Integrating the full set of interventions into existing health services using a public health approach is also likely to optimize the synergies between HIV prevention and treatment and other health services, thereby contributing to overall health systems strengthening.

WHO will provide guidance to countries adapting the Model Essential Package to local needs, including on how the different interventions can be integrated into various service delivery models. WHO will also periodically update the list of interventions in the Model Essential Package based on new data and country experience.

**Table 2. The Model Essential Package of integrated health sector interventions for HIV prevention, treatment, care and support**

Health facility-based interventions
<ul style="list-style-type: none"> <li>• <b>Information and education on preventing HIV transmission</b></li> <li>• <b>HIV testing and counselling, including:</b> <ul style="list-style-type: none"> <li>– Provider-initiated testing and counselling</li> <li>– Infant testing and diagnosis</li> <li>– Family testing and counselling</li> </ul> </li> <li>• <b>Prevention of mother-to-child transmission of HIV, including:</b> <ul style="list-style-type: none"> <li>– Information and counselling on preventing HIV transmission</li> <li>– Family planning for pregnant women living with HIV/AIDS</li> <li>– Use of antiretroviral drugs to prevent HIV transmission from mother to child</li> <li>– Infant feeding counselling</li> <li>– HIV treatment and care for infected mothers, infants and other family members</li> </ul> </li> <li>• <b>Prevention of sexual transmission, including:</b> <ul style="list-style-type: none"> <li>– STI detection and management</li> <li>– Safer sex and risk reduction counselling</li> <li>– Condom promotion and provision</li> <li>– Special interventions for sex workers, men who have sex with men and adolescents</li> </ul> </li> <li>• <b>Harm reduction for injecting drug users, including:</b> <ul style="list-style-type: none"> <li>– Risk reduction information and education</li> <li>– Sterile needle and syringe provision and exchange</li> <li>– Opioid substitution therapy</li> <li>– Hepatitis B vaccination</li> </ul> </li> <li>• <b>Prevention of transmission in health-care settings, including:</b> <ul style="list-style-type: none"> <li>– Safe blood</li> <li>– Universal precautions and safe medical waste management</li> <li>– Safe injections</li> <li>– Post-exposure prophylaxis</li> </ul> </li> <li>• <b>Prevention services for people living with HIV/AIDS</b></li> <li>• <b>Clinical management of people living with HIV/AIDS, including</b> <ul style="list-style-type: none"> <li>– Co-trimoxazole prophylaxis</li> <li>– Management of opportunistic infections and comorbidities (including mental health and hepatitis)</li> <li>– TB-HIV co-management</li> <li>– Palliative care (symptom management and end-of-life care)</li> <li>– Nutritional support</li> <li>– Antiretroviral therapy</li> <li>– Specific focus on care and treatment for health workers</li> </ul> </li> </ul>
Community-based interventions
<ul style="list-style-type: none"> <li>• <b>HIV testing and counselling, including:</b> <ul style="list-style-type: none"> <li>– Voluntary HIV counselling and testing</li> <li>– Home-based testing and counselling, for partners and, in high HIV prevalence settings, for Know Your Status campaigns</li> </ul> </li> <li>• <b>Community-based prevention, including:</b> <ul style="list-style-type: none"> <li>– Prevention information and education</li> <li>– Prevention interventions for vulnerable and most-at-risk populations</li> <li>– Prevention for people living with HIV/AIDS</li> </ul> </li> </ul>

- **HIV/AIDS treatment and care, including:**
  - Treatment preparedness for both HIV and TB
  - Treatment support for antiretroviral therapy, TB treatment and prophylaxis
  - Psychosocial support
  - Home-based palliative care
  - Home delivery of drug refills
  - Peer support groups

### Interventions delivered through outreach to most-at-risk populations (in partnership with other sectors)

- **HIV testing and counselling, including**
  - Outreach HIV testing and counselling, including use of HIV rapid tests
  - Referral from outreach to HIV testing and counselling services
- **HIV prevention outreach to most at-risk populations, including sex workers, drug users, men who have sex with men, young people and mobile populations, including:**
  - Peer-based information and education
  - Condom promotion and programming, including 100% condom promotion campaigns
  - Provision and exchange of sterile needles and syringes
  - Targeted STI and sexual and reproductive health services, particularly for vulnerable girls and women
  - Referral to specific prevention services
- **HIV/AIDS treatment and care**
  - Integration of treatment support for antiretroviral therapy, TB treatment and prophylaxis in outreach services

### National measures needed to support service delivery

#### Advocacy and leadership, including:

- Policies, laws and regulations that support HIV and STI programmes
- Measures to counter discrimination and stigmatization of people living with HIV/AIDS and most-at-risk populations
- Mobilizing communities, NGOs, people living with HIV/AIDS, most-at-risk groups and the business sector
- **National strategic planning and programme management**
  - National strategic and operational plans incorporating priority health sector interventions
  - National protocols and standards for service delivery
  - National targets for each major intervention area
- **Procurement and supply management, including:**
  - Updated national essential medicines lists and efficient drug registration systems
  - Secure and functional procurement and supply management systems for HIV medicines, diagnostics and other commodities
- **Laboratory services, including:**
  - HIV diagnosis and treatment monitoring
  - Diagnosis of TB and other opportunistic infections
  - HIV screening of blood and blood products
- **Human resources, including:**
  - National human resource plan
  - Health-worker training
  - Health-worker retention schemes and career development
- **Sustained financing**
  - Costed national HIV plans
  - Resource mobilization, accountability and reporting mechanisms
- **HIV and STI strategic information systems, including:**
  - National HIV, STI and behavioural surveillance
  - Population HIV drug resistance surveillance and pharmacovigilance monitoring
  - National HIV monitoring and evaluation system and programmes
  - Operational research

## 4.2 Tools to support implementation of the Model Essential Package

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Consulting and working with many partners, WHO has developed or is developing a range of guidelines and tools to support implementation of those interventions in the Model Essential Package that fall within the five strategic directions of the WHO HIV/AIDS Plan 2006–2010 (Section 5). These guidelines and tools promote a public health approach to scale-up, with a focus on operationalizing the Model Essential Package at the district, health facility and community levels. They include:

- **Normative guidelines**

Normative guidelines are available or in development for each of the interventions in the Model Essential Package that fall within the five strategic directions of the WHO HIV/AIDS Plan 2006–2010, developed to their public health application. These include guidelines on antiretroviral therapy for preventing mother-to-child transmission; guidelines on paediatric patients, adults and adolescents revised in 2006; clinical and immunological staging; provider-initiated testing and counselling; prevention guidelines for people living with HIV/AIDS, and post-exposure prophylaxis. WHO also provides guidance on quality and appropriateness of HIV and related diagnostics, HIV testing strategies, essential laboratory tests by facility level and quality management systems for laboratory and testing services. The audience for these guidelines is national AIDS programme staff and a broad range of health sector stakeholders, especially service providers.

- **Operational tools**

Simplified operational tools and guidelines are available for integrating into health services the interventions in the Model Essential Package that fall within the five strategic directions of the WHO HIV/AIDS Plan 2006–2010. These tools and guidelines promote the use of clinical teams which, although supervised by doctors or medical officers, are largely composed of nurses, clinical officers and other trained and remunerated lay providers, including people living with HIV/AIDS.

The tools and guidelines draw upon several service delivery models, including the Integrated Management of Adult and Adolescent Illness (IMAI) and Integrated Management of Childhood Illness (IMCI) approaches developed by WHO and partners. This model supports the public health approach to scale-up based on hospital, health centre and community delivery of acute and chronic care, integrated into basic health services. Provider-initiated testing and counselling, prevention approaches for both HIV-negative and HIV-positive patients, STI management and tools for prevention of HIV transmission in the health-care setting are included. The materials also support PMTCT interventions integrated with antenatal, labour and delivery, post-partum, and newborn care, drawing from existing integrated and stand-alone PMTCT intervention tools. In this model, populations most at risk of HIV infection are provided with special services within health facilities and by peer outreach for sex workers, injecting drug users, men who have sex with men, youth and mobile populations (using rapid assessments and other tools).

- **Training and capacity-building materials**

Training curricula that address the interventions in the Model Essential Package that fall within the five strategic directions of the WHO HIV/AIDS Plan 2006–2010 have been developed for different cadres of health-care workers. The curricula consist of compatible modular, short training courses based on the IMAI and IMCI approaches, PMTCT and targeted interventions for populations most-at-risk. The materials include support for health service management at national and district level; training and job aids for clinical teams and community health workers, as well as follow-up mechanisms after training, including clinical, counselling and management mentoring, supportive supervision and other quality assurance approaches. These tools provide a simplified, standardized approach for each component by target audience (district and national managers, clinical officers, medical officers, nurses, counsellors, community health workers, peer outreach workers, people living with HIV/AIDS). The tools convey consistent messages and promote links between levels of care and clinical and counselling mentoring after training. Support needs to be provided for distance communication (mobile phone or radio) to facilitate consultation and clinical mentoring.

- **A core information system for facilities and districts**

Materials are available to support the introduction of standardized patient monitoring systems for HIV/AIDS care and antiretroviral therapy, TB and PMTCT interventions; and under-five care. The WHO Service Availability Mapping (SAM) technology is available to help track service availability at health facilities.

- **Drug and diagnostic supply management**

At facility level, drug and diagnostic supply management training and on-site support after training are provided. These prepare facilities to organize, record, and order supplies (antiretrovirals and drugs for opportunistic infections, HIV test kits, and other essential HIV commodities); to dispense medications; and to forecast antiretroviral drug requirements, including paediatric formulations.

## 5. THE WHO HIV/AIDS PLAN FOR 2006–2010

### 5.1 Context

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Article 2 of WHO's Constitution sets out the Organization's mandate to serve as the "directing and coordinating authority on international health work", and its responsibilities, *inter alia*, to "assist governments, upon request, in strengthening health services" and to "furnish appropriate technical assistance".

The Organization's overall strategic directions for international health work in the next 10 years are set out in its Eleventh General Programme of Work 2006–2015, which guides the development of biennial Programme Budgets. HIV/AIDS is a major organizational priority. The 2006–2007 Programme Budget includes Organization-wide expected results and a budget for the HIV/AIDS area of work. Strategic Objective 1 of the WHO Medium-Term Strategic Plan 2008–2013, currently being developed, has the aim of halting and starting to reverse the spread of HIV/AIDS, tuberculosis and malaria by 2015, consistent with Millennium Development Goal 6.

WHO's comparative advantages include its close relationship supporting and advising ministries of health at the request of Member States. Through its presence at global, regional and country levels, the Organization is well-placed to convene and mobilize many actors in the health sector, including bilateral and multilateral donors, technical agencies, the private sector, FBOs and CBOs, as well as research institutions. The Organization also has extensive experience building consensus on global public health standards, a strong technical base and networks and a well-established role in identifying, collecting and synthesizing health information. In recent years, the "3 by 5" Initiative has provided valuable experience and lessons about the rapid scale-up of HIV/AIDS responses within the health sector.

### 5.2 The WHO HIV/AIDS Programme

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The WHO Global Health Sector Strategy for HIV/AIDS 2003–2007, endorsed by the 56th World Health Assembly in 2003, sets out the core components of a health sector response to HIV/AIDS and strategies for effective action at a country level. These strategies form the basis of the work of the WHO HIV/AIDS programme to support its Member States in working towards universal access to prevention, treatment, care and support in the period 2006–2010 (see Section 5.3).

Because of the need for a multisectoral response to HIV/AIDS, WHO undertakes its HIV/AIDS work as one of ten cosponsoring agencies of UNAIDS. Under the UNAIDS Technical Support Division of Labour, WHO takes the lead within the United Nations system on many of the key interventions delivered by the health sector. These are:

- Antiretroviral therapy and monitoring;
- HIV/AIDS diagnostics and laboratory services;
- Prophylaxis for and treatment of opportunistic infections;
- Prevention of HIV transmission in health-care settings;
- Blood safety;
- Counselling and testing;
- Diagnosis and treatment of sexually transmitted infections;
- Linkage of HIV prevention with AIDS treatment services;
- Establishing and implementing HIV surveillance through sentinel and population-based surveys.

With UNICEF, WHO jointly leads United Nations work on PMTCT. Because of its broad health-sector mandate, WHO also works closely with United Nations partners who have lead responsibility in other areas of the response to the AIDS epidemic. These areas include prevention targeted at young people, sex workers, men who have sex with men and other at-risk groups; prevention of HIV transmission among injecting drug users and in prisons; care and support for people living with HIV, orphans, vulnerable children and affected households.

## WHO vision and mission for HIV/AIDS

**Vision:** *Universal access to HIV prevention, treatment and care.*

**Mission:** *To provide leadership, guidance, and assurance of technical excellence at a global level in the health sector's response to HIV/AIDS; and to assist and support regions and countries in their efforts to provide universal access to the highest possible level of HIV/AIDS prevention, treatment and care.*

### 5.3 Strategic directions for 2006–2010

WHO's HIV/AIDS work for the period 2006–2010 is structured around five *strategic directions*, each of which represents a critical area where the health sector must lead if countries are to make progress towards achieving universal access. Within each strategic direction, WHO will concentrate its efforts on a limited number of *priority health sector interventions*. These interventions form the core elements of the Model Essential Package described in Section 4.

WHO's strategic directions for the period 2006–2010 were reported to, and welcomed by, the 59<sup>th</sup> World Health Assembly in May 2006, including WHO's intention to report annually on the health sector's progress in scaling up towards universal access.

While WHO will continue to provide broad-ranging assistance at the request of Member States to scale up national health sector responses to HIV/AIDS, the choice of a limited number of strategic directions and priority interventions acknowledges the importance of focusing efforts in areas where the Organization has a comparative advantage and where there is sound evidence that significant impact on the HIV/AIDS pandemic can be achieved.

WHO's normative and policy guidance and technical support for each of the strategic directions and priority interventions are based on the public health approach to scaling up HIV/AIDS prevention, treatment, care and support. For each of the priority interventions, WHO will do the following:

- Advocate for action and mobilize partnerships;
- Synthesize existing knowledge, support operational research and disseminate the evidence base on the effectiveness of each intervention and models of good practice for service delivery;
- Articulate global and regional policy options;
- Set norms and standards and develop, update and adapt assessment, policy, programme, training and monitoring and evaluation tools and guidelines for their implementation;
- Provide technical assistance to countries and help build sustainable institutional capacity to scale up national HIV/AIDS responses;
- Support monitoring and evaluation of intervention implementation, which includes assisting countries to select indicators and set targets; and
- Facilitate the integration of gender and equity issues into the design, delivery, monitoring and evaluation of the interventions.

The strategic directions and the related priority interventions are described below, along with WHO's objective for each priority intervention, which reflects the Organization's role in setting global norms and standards. WHO recognizes that the process of setting coverage targets for achieving universal access in relation to the priority interventions needs to be country-driven, and is working with UNAIDS to develop guidelines to assist countries in this process.

### 5.3.1 Strategic direction 1:

#### Enabling people to know their HIV status through confidential HIV testing and counselling

##### Testing and counselling: Priority interventions

- Voluntary HIV counselling and testing (VCT)
- Provider-initiated HIV testing and counselling
- Infant HIV diagnosis and family testing and counselling

#### WHO objective

To assist countries in developing and implementing comprehensive and integrated HIV testing and counselling policies, plans and programmes based on international good practice and guided by WHO normative tools and guidelines. This involves addressing both client- and provider-initiated testing and counselling; early infant diagnosis; partner and family testing and counselling; the use of rapid tests to diagnose HIV infection; and other innovative approaches to learning HIV status.

### 5.3.2 Strategic direction 2:

#### Maximizing the health sector's contribution to HIV prevention

##### Prevention: Priority intervention 1

*Prevention of sexual transmission of HIV*

#### WHO objective

To assist countries in developing and implementing comprehensive and integrated health sector policies, plans and programmes for preventing sexual transmission of HIV, based on international good practice and guided by WHO normative tools and guidelines. A particular focus will be given to condom programming; preventing and controlling sexually transmitted infections; rapid referral and prompt treatment of people with sexually-transmitted infections; outreach to populations at highest risk (including sex workers, men who have sex with men, young people, prisoners and drug users); behavioural interventions; and integrating HIV/AIDS into sexual and reproductive health services, linking closely with other relevant sectors, including education, youth and social welfare.

##### Prevention: Priority intervention 2

*Prevention for people living with HIV/AIDS*

#### WHO objective

To assist countries in developing and implementing the prevention component of a package of HIV services for people living with HIV/AIDS through the provision of normative guidance and technical support. These interventions may include information and counselling to prevent transmission to sexual partners, support for partner notification and beneficial disclosure, HIV testing for partners and children and preventive care such as bed nets for malaria prevention, co-trimoxazole, safe water and screening and preventive therapy for TB.

### Prevention: Priority intervention 3

*Prevention of HIV transmission through injecting drug use (harm reduction)*

#### WHO objective

To assist countries where injecting drug use exists to implement a comprehensive harm reduction package for HIV/AIDS prevention, treatment and care among drug users and their sexual partners in order to minimize HIV transmission associated with injecting drug use and promote equitable access to HIV/AIDS treatment and care for drug users living with HIV/AIDS.

### Prevention: Priority intervention 4

*Prevention of mother-to-child HIV transmission*

#### WHO objective

To assist countries in working towards the goal of eliminating HIV infection in infants and young children by providing a standard package of comprehensive HIV prevention, care, treatment and support services for women and children for PMTCT. This will be achieved through developing and implementing comprehensive and integrated PMTCT policies, plans and programmes based on international good practices and guided by WHO normative tools and guidelines, and ensuring integration of PMTCT and broader HIV issues within reproductive health and maternal and child health services.

### Prevention: Priority intervention 5

*Prevention of HIV transmission in the health care setting*

#### WHO objectives

To assist countries to minimize HIV transmission in health care settings by:

- making available the methods and knowledge needed to protect both health care workers and patients;
- establishing national blood programmes that ensure the provision of safe, high-quality blood and blood products accessible to all patients requiring transfusion, and their safe and appropriate use;
- promoting the safe and appropriate use of injections worldwide in collaboration with the Safe Injection Global Network;
- developing and implementing policies and programmes on standard bio-safety precautions;
- promoting occupational health and safety procedures including the Joint ILO/WHO Guidelines on Health Services and HIV/AIDS; and
- promoting universal access to post-exposure prophylaxis (PEP) for those exposed to HIV in health care settings.

### Prevention: Priority intervention 6

*Assessment and development of new HIV prevention technologies and approaches*

#### WHO objectives

- To promote and facilitate research into and development of new HIV prevention technologies and approaches.
- To monitor, synthesize and analyse new evidence so as to advise countries on the potential application of new technologies and approaches, and to assist them in preparing for their introduction and scale-up.

### 5.3.3 Strategic direction 3:

#### Accelerating the scale-up of HIV/AIDS treatment and care

##### Treatment and care: Priority intervention 1

*Antiretroviral therapy for children and adults living with HIV/AIDS*

##### WHO objective

To assist countries in scaling up access to antiretroviral therapy with the goal of achieving at least 80% coverage of treatment for those in need, ensuring equitable access for adults, children and infants by gender and mode of transmission, guided by evidence-based norms, standards and guidelines that promote a public health approach.

##### Treatment and care: Priority intervention 2

*Prevention and management of opportunistic infections and comorbidities*

##### WHO objective

To assist countries in scaling up HIV/AIDS treatment and care that adequately addresses the prevention and management of HIV-related opportunistic infections and common co-infections and other co-morbidities, ensuring equitable access for adults, children and infants, guided by evidence-based norms, standards and guidelines, using a public health approach and addressing the needs of specific populations.

##### Treatment and care: Priority intervention 3

*Care, including nutrition, palliative care and end-of-life care*

##### WHO objective

To assist countries in implementing an essential package for HIV/AIDS care that adequately incorporates nutrition, palliative care and end-of-life care, ensuring equitable access for adults, children and infants, guided by evidence-based norms, standards and guidelines using a public health approach and addressing the needs of specific populations.

##### Treatment and care: Priority intervention 4

*Linking HIV/AIDS and tuberculosis services*

##### WHO objective

In association with the Stop TB Partnership and other partners, to assist countries in reducing the burden of HIV-related TB and maximizing the use of TB services as an entry point for HIV/AIDS prevention, diagnosis, treatment and care through improved collaboration between HIV/AIDS and TB programmes at country and global levels.

#### 5.3.4 Strategic direction 4:

### Strengthening and expanding health systems

#### Health systems: Priority intervention 1

*Leadership and stewardship*

#### WHO objective

To advocate for strong commitment and action from countries, donors and opinion leaders to support the health-sector response in scaling up HIV/AIDS prevention, treatment and care towards universal access.

#### Health systems: Priority intervention 2

*National strategic planning and management*

#### WHO objective

To support countries in developing and implementing comprehensive national health sector policies, strategies and plans for scaling up towards universal access to HIV/AIDS prevention, treatment and care, incorporating the five WHO strategic directions of the WHO HIV/AIDS Plan and guided by the public health approach and the Model Essential Package.

#### Health systems: Priority intervention 3

*Procurement and supply management*

#### WHO objective

Working with other partners in the AIDS Medicines and Diagnostics Service, to assist countries in ensuring that the supply of quality HIV-related commodities is never an obstacle to expanding HIV/AIDS prevention, treatment and care by providing strategic information on commodity supply and technical assistance to strengthen national procurement and supply management systems.

#### Health systems: Priority intervention 4

*Laboratory strengthening*

#### WHO objective

To support countries in expanding access to quality HIV diagnostics of assured quality through prequalification and bulk procurement of suitable technologies; and to help countries strengthen HIV testing and HIV-related laboratory services by providing guidance, training, quality assurance programmes and technical support.

#### Health systems: Priority intervention 5

*Human resource development and management*

#### WHO objective

To support countries in planning and implementing comprehensive plans for developing and maintaining adequate human resources to achieve universal access, including comprehensive pre-service and in-service learning programmes, adequate access to HIV/AIDS prevention and treatment for the health workforce, and sustainable working conditions and financing for the health workforce.

## Health systems: Priority intervention 6

*Strategies for sustained financing*

### WHO objective

To assist countries in developing strategies for long-term financing of national responses to HIV/AIDS, including potential mechanisms such as social insurance and risk pooling, within the context of broader development and health financing strategies.

### 5.3.5 Strategic direction 5:

#### Investing in strategic information to guide a more effective response

### Strategic information: Priority intervention 1

*HIV/AIDS and STI surveillance*

### WHO objectives

- To conduct global surveillance of HIV and related risk behaviours, and to analyse and disseminate information.
- To assist countries in developing and implementing surveillance systems and estimating HIV and STI prevalence and incidence, guided by UNAIDS/WHO normative tools and guidelines that are continually improved as a result of new developments in the field.

### Strategic information: Priority intervention 2

*Surveillance of HIV drug resistance surveillance and side effects*

### WHO objectives

- To assist countries in the development and implementation of national strategies to assess and minimize the emergence and transmission of HIV drug resistance.
- To disseminate global, regional and national drug resistance information and findings to support public health policy and action; and to analyse and disseminate best practices as they relate to limiting drug resistance.

### Strategic information: Priority intervention 3

*Monitoring and evaluation of and reporting on the health sector's response towards universal access*

### WHO objective

To monitor the global health sector response to HIV/AIDS and progress towards universal access to HIV treatment, prevention and care (including availability, coverage and impact of key health-sector interventions) and to assist countries in monitoring their health sector response to HIV/AIDS guided by international normative tools and guidelines, focusing on the key interventions in the health sector.

## Strategic information: Priority intervention 4

*Operational research*

### WHO objective

To support the "learning by doing" approach to the scale-up of HIV prevention, care and treatment, by identifying programme research needs and using operational research to improve the function and efficiency of programmes; to foster coordination among stakeholders at the country and international levels; to facilitate and support the implementation of operational research in countries; to promote the development and use of standardized tools for data collection and analysis; to synthesize evidence; to encourage comparisons across settings to learn from evidence; and to disseminate research findings.

### 5.4 Focus on countries

WHO is structured to provide a mechanism by which knowledge and evidence can be translated into good practice at country level, where the millions of people in need of HIV/AIDS services live.

The Department of HIV/AIDS at WHO headquarters provides overall coordination of the HIV/AIDS programme and is responsible for global advocacy and policy on HIV/AIDS issues and developing technical norms and standards in many intervention areas. The Department also provides support to regional and country offices and other technical departments and partners with many other global organizations and initiatives.

As HIV/AIDS is an organization-wide priority, more than 30 other departments contribute to the HIV/AIDS area of work at headquarters, including the departments of Child and Adolescent Health; Gender, Women and Health; Making Pregnancy Safer; Reproductive Health and Research (including the team on Control of Sexually Transmitted Infections); Stop TB; Global Malaria Programme; Medicines Policy and Standards; Technical Cooperation for Essential Drugs and Traditional Medicines; Essential Health Technologies; Equity in Health; Health Systems Financing; Human Resources for Health; Measurement and Health Information Systems; Nutrition for Health and Development and Mental Health and Substance Use, as well as their regional and country counterparts.

The six WHO regional offices provide the first-level response for countries seeking technical support. The regional offices also adapt generic global tools and guidelines to local contexts, develop technical standards unique to the region and identify areas where additional support is required from WHO headquarters or from other partners.

Given that most action against HIV/AIDS needs to take place at country level and be country-driven, strong and responsive country offices are central to the organization's work. Dedicated HIV/AIDS staff in 69 WHO country offices provide day-to-day technical support to national health ministries consistent with national HIV/AIDS plans and strategies. They work closely with United Nations partners through the United Nations Theme Group mechanism, as well as with donors and other implementing partners.

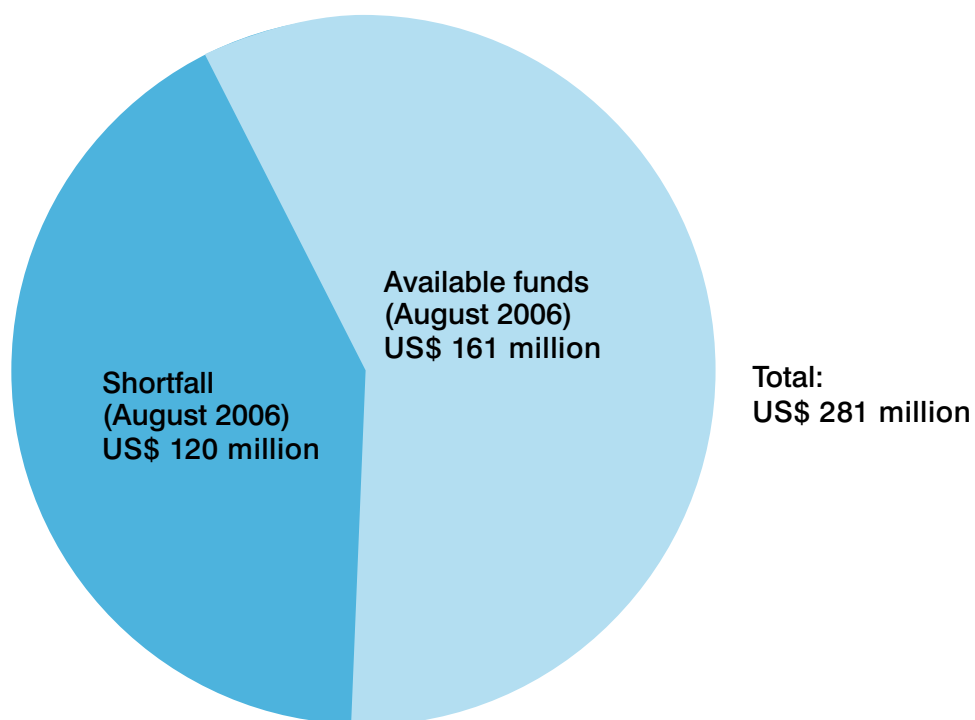
The increased decentralization of WHO's resources to regional and country level in recent years is enabling the organization to work more closely with local stakeholders and to tailor the broad principles and policies of an effective HIV/AIDS response to local conditions. The 2006–2007 WHO Programme Budget allocates 16% of available resources for HIV/AIDS to WHO headquarters and 84% to regional and country offices.

## 6. WHO BUDGET

WHO has a biennial programme budget planning cycle. The planned budget for the core WHO HIV/AIDS area of work for 2006-2007 is US\$281 million with an additional amount of US\$99 million required to support HIV-related activities in other programme areas (including sexual and reproductive health, tuberculosis, nutrition, essential medicines, health technologies and human resources for health). To fully implement the WHO universal access plan, it is estimated that the budget required for the three-year period 2008-2010 will be US\$ 414 million for the core HIV/AIDS area of work and an additional US\$ 137 million for other programme areas.

The overall WHO HIV/AIDS budget is dependent on voluntary contributions from Member States and other donors. As of August 2006 the budget gap for the core HIV/AIDS area of work for 2006-2007 was US\$ 120 million.

**Fig. 1. WHO Core HIV/AIDS Budget 2006-2007**



## 7. CONCLUSION

The health sector in low- and middle-income countries faces great responsibilities, challenges and opportunities as it draws upon the lessons and progress of the last few years and moves to further scale up towards universal access to HIV/AIDS prevention, treatment, care and support by 2010. Central to the response to the epidemic in every country, the health sector includes a diverse range of stakeholders of varying capacities, including often weak public health systems as well as private, FBO and CBO service providers. All must play their part and work together towards universal access.

Much has been learned already about the weaknesses in health systems that are preventing countries from scaling up more quickly. Without focused attention to improving management capacity, procurement and supply systems, laboratory infrastructure, health information systems and the number of available health-care personnel, universal access will not be achieved. The lack of secure, long-term financing means that many countries are reluctant to set sufficiently ambitious goals.

The encouraging progress made in expanding access to treatment has not yet been matched with a parallel scale-up of prevention, which is so essential to ensuring long-term success against the epidemic and the sustainability of treatment programmes. The health sector can and must play a much more effective role in HIV prevention, especially in expanding HIV testing and counselling, PMTCT, offering prevention services to people living with HIV/AIDS and ending the health sector's neglect of the groups who most need prevention services, especially injecting drug users, sex workers and men who have sex with men.

Sound, evidence-based tools and approaches exist to help countries address these challenges. The public health approach described in this document offers a series of specific measures that can be taken—even in the most resource-limited settings—to optimize available resources, overcome health systems constraints and scale up HIV/AIDS health services at the pace and to the scale needed.

WHO's strategic directions and priority interventions for 2006-2010 focus the organization's work on the challenges being faced by governments, health systems, and local health services. Working to achieve universal access to HIV/AIDS prevention, treatment, care and support is an important step in realizing WHO's overarching objective: the attainment by all people of the highest possible level of health.





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