

## AT A GLANCE

# TOWARDS UNIVERSAL ACCESS

## Scaling up priority HIV/AIDS interventions in the health sector

### JUNE 2008 PROGRESS REPORT

This document represents material excerpted from *Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector*, a progress report published in June 2008 by the HIV/AIDS Department of the World Health Organization. To read the complete report, please visit: <http://www.who.int/hiv>



*Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector* is the second in a series of annual progress reports developed by WHO, UNAIDS and UNICEF to monitor the health-sector response to HIV/AIDS. It documents health-sector progress towards:

- Treatment and care, including antiretroviral therapy (ART), management of HIV/TB co-infection and other co-morbidities;
- HIV testing and counselling;
- Prevention of mother-to-child transmission (PMTCT), in health care settings, and of sexual HIV transmission and transmission through injecting drug use;
- Health systems issues, including drug procurement and supply management, human resources and health information.

This report also includes a special focus on scaling up HIV interventions for women and children.

The end of 2007 marks an important step in the history of the HIV epidemic. According to the WHO, UNAIDS and UNICEF report *Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector*, nearly a million more people (950 000) were receiving treatment with antiretroviral therapy (ART) in low- and middle-income countries by year's end, bringing the total number of recipients to close to 3 million—a more than seven-fold increase over four years.

The WHO/UNAIDS '3 by 5' initiative, which sought to have 3 million individuals on treatment by 2005, is widely credited with jump-starting the global effort to provide widespread ART access to people in need living in low- and middle-income countries.

In 2007, that target was achieved a scant two years after the 2005 deadline. Not only has the number of people receiving treatment increased dramatically, but the pace of scale-up has also accelerated.

The year 2007 also saw gains in access to interventions designed to prevent mother-to-child transmission (PMTCT), as well as increased testing and counselling and greater country commitment to male circumcision. An increasing number of children are also benefiting from paediatric ART programmes. At the end of 2007, an estimated 200 000 children were receiving ART compared to 127 000 in 2006 and 75 000 in 2005.

Nevertheless, countries are still far from meeting universal access goals. An estimated 2.5 million people were newly infected with HIV in 2007, and overall, ART coverage still remains low—only 31% of people estimated to be in need of treatment in low- and middle-income countries were receiving it in 2007.

Moreover, weak health systems and, in particular, a critical shortage of health-care personnel and a lack of long-term sustained funding threaten efforts to achieve universal access to HIV prevention, treatment and care. At the end of 2007, the gap between required and available funding was estimated to be US\$ 8.1 billion. To meet universal access targets, funding will have to more than quadruple to US\$ 35 billion in 2010 and to US\$ 41 billion in 2015.

### ABOUT THE REPORT

*Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector*, a collaboration between WHO, UNAIDS and UNICEF, is the definitive yearly chronicle of the health-sector response to HIV prevention, treatment and care. This is the second annual progress report to examine HIV within the context of the health sector. The latest edition features a special focus on women and children.

### DATA AND METHODOLOGY

Data come from two main sources. These are:

- A WHO country questionnaire designed to document the availability, coverage, outcome and impact of priority HIV health-care interventions, as well as other key components that support the health sector scale-up. These include procurement, supply management and human resources.
- A joint UNICEF/WHO 'report card' that charts progress in PMTCT and paediatric HIV care.

Both include data from national HIV programmes compiled by Ministries of Health as well as data collected from population-based surveys. Other sources of information include different surveys focused on specific areas—for example, drug prices and utilization, TB/HIV interventions, universal precautions in health-care settings, and harm reduction interventions.

### A NOTE ABOUT ESTIMATING NEED

Although the number of people receiving ART increased in 2007, so too has the estimated need for treatment. The parameters for estimating needs have changed based on updated evidence. The estimated time between treatment eligibility and death without treatment has increased from 2 to 3 years. This has resulted in a significant increase in the number of people considered to be in immediate need of treatment. Estimates of need will likely continue to change as more people become eligible each year and as treatment guidelines evolve.

## Chapter 2

### TREATMENT AND CARE OF PEOPLE LIVING WITH HIV

By the end of 2007 an estimated 33.2 million people worldwide were living with HIV, of whom 2.1 million were children. That same year, an estimated 2.5 million were newly-infected with HIV while 2.1 million died of AIDS. Nearly 1 million more people were receiving antiretrovirals (ARVs) at the close of 2007 than in December of 2006. This means that approximately 3 million people in low- and middle-income countries were receiving antiretroviral therapy at year's end. Moreover, the number of people receiving ART leapt by 54% in 2007 alone.

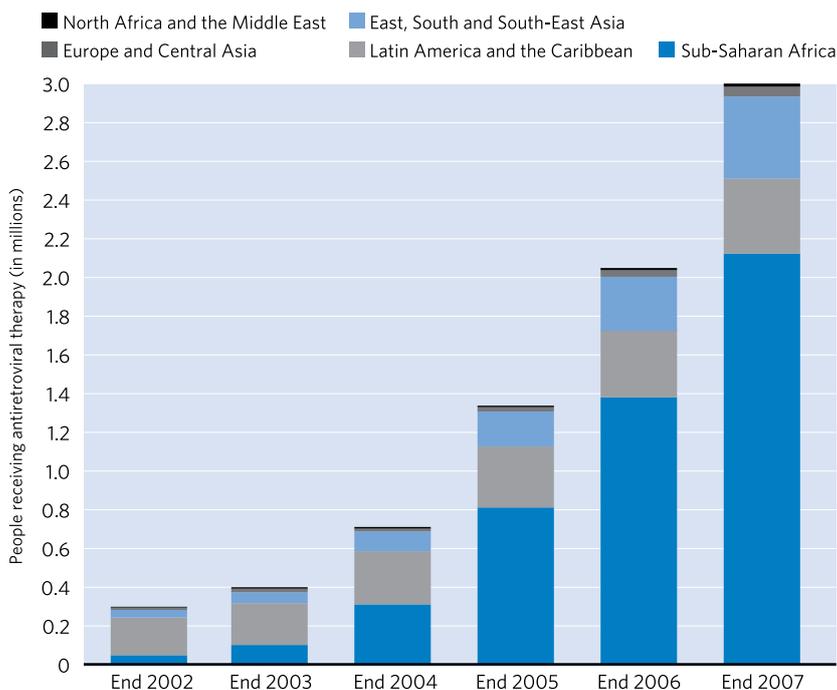
Today, fully 72% of those receiving therapy in 2007 live in sub-Saharan Africa. This brings the total number of individuals taking life-saving medicines in sub-Saharan Africa to more than 2 million. Women enjoy greater or equal treatment access as compared to men, though men may be falling behind in a number of countries. Experts speculate that this may be because women are more likely to access health-care services for reproductive needs such as pregnancy and childbirth.

Because of wider access to antiretrovirals, patient survival rates have increased worldwide, but mortality remains unacceptably high during the first six months of treatment. This is because too many people living with HIV are unable to access services until it is too late. Low rates of patient 'retention' are another obstacle to sustained scale-up. Treatment interruptions compromise patient health and may also lead to the emergence of drug resistant HIV strains. Despite this, recent surveys undertaken in seven countries reveal that the transmission of resistant HIV strains is less than 5%.

#### LOWER PRICES, GREATER ACCESS

From 2004 to 2007, the prices of most first-line ARV drug regimens decreased by 30% to 64% in low- and middle-income countries. This dramatic drop has been an important factor behind the expansion of ART. Prices, however, still remain high in a number of Eastern European and Latin American countries. In almost all low- and middle-income countries the cost for second-line regimens remains troublingly expensive.

Number of people receiving antiretroviral therapy in low- and middle-income countries, 2002-2007



### HIV AND TB: TWO SCOURGES, ONE SOLUTION

Tuberculosis (TB) continues to be one of the leading causes of death among people living with HIV. In 2006, an estimated 700 000 people living with HIV developed the disease. About 12% of deaths among people living with HIV worldwide are owing to TB. South Africa, for example, is home to less than 1 per cent of the world's population but accounts for 28% of people co-infected with HIV and TB worldwide.

Since the spread of HIV in the 1980s and 1990s, TB cases have increased between two and six-fold in sub-Saharan Africa, resulting in an enormous demand on already overburdened health services. Lack of access to co-trimoxazole, a common anti-biotic prescribed to prevent and control other opportunistic infections, contributes to higher morbidity and mortality rates in those individuals co-infected with TB and HIV.

The emergence of ever-more dangerous strains of multidrug-resistant TB, including extensively drug-resistant TB

(XDR-TB), represents a critical threat to global health. Half a million of the 9 million new cases of TB reported in 2007 were multi- drug resistant. Eastern Europe and Central Asia reported the highest rates while in sub-Saharan Africa, only six countries were able to provide reliable data. This makes it extremely difficult to assess the true burden of co-infection.

XDR TB, which is virtually untreatable, was recorded in 45 countries in 2007, including in South Africa, which now constitutes the epicenter of the HIV epidemic. The death rate among those co-infected with HIV and XDR-TB was a staggering 95%.

Slowing and halting the impact of TB among people living with HIV will require a new focus on preventing, diagnosing and treating the disease, including a greater emphasis on the 'Three Is': **I**ntensified case finding, **I**soniazid preventive therapy, and **I**nfection control.

### HEPATITIS AND HIV

Chronic liver disease, a major complication of chronic hepatitis B virus (HBV) and hepatitis C virus (HCV) infection, is now a leading cause of morbidity and mortality among people living with HIV. Chronic liver disease can also significantly increase the toxicity of some antiretroviral drugs.

Of the more than 30 million people infected with HIV worldwide, about 3 million are chronically infected with HBV and between 4 and 5 million people are co-infected with HCV. Rates of HBV are high in the endemic countries of Asia and Africa, as are rates of both HBV and HCV among injecting drug users in all countries.

The prevalence of chronic HCV infection among people living with HIV in Western Europe and the United States is estimated to be in the range of 25%-30%. Co-infection rates average more than 40% in Eastern Europe, and in Estonia, the Russian Federation and Ukraine, between 70%-95%.

Countries need to make greater efforts to assess the magnitude of disease associated with HBV and HCV virus among people living with HIV, and to ensure that treatment is available.

## Chapter 3

### HIV TESTING AND COUNSELLING

Access to HIV testing and counselling is a prerequisite for accelerating access to other HIV interventions. Between 2006 and 2007, the number of facilities providing HIV testing and counselling services increased substantially. Uptake, however, remains low. According to population-based surveys undertaken in low- and middle income countries between 2005 and 2007, a median of only:

- 10.9% of women and 10.3% of men surveyed in 17 countries had ever received an HIV test and known the results.
- 20% of those living with HIV/AIDS in 12 countries knew their HIV status.

In the highest prevalence countries, the percentage of health facilities offering testing and counselling services varies widely. For example, while 100% of health facilities in Botswana offer testing and counselling, that number drops to 68% in Swaziland, and only 31% in Burkina Faso.

### CLIENT- AND PROVIDER-INITIATED TESTING AND COUNSELLING

In countries with available data, the numbers of individuals who have been tested increased in 2007. This could be because treatment is now more widely available and testing has become more convenient and easily accessible. The introduction of rapid tests, which do not require laboratory technicians, invasive procedures or specialized equipment, as well as a trend towards offering tests in workplaces, health facilities, mobile clinics and at home, have likely led to increased uptake.

Despite some positive trends, however, client-initiated testing (whereby a patient requests a test) has often not reached desired levels. This may be largely owing to fear, concerns about stigma, and the underestimation of personal risk, as well as other causes.

Prior to the increased availability of ART, there was little support for 'provider-initiated' testing, in which the health-care practitioner recommends that a patient be tested. The increasing availability of treatment, however, offers good reason to increase HIV testing and counselling in order to facilitate treatment, promote prevention and de-stigmatize HIV. Today, there are increasing efforts to incorporate HIV testing and counselling into routine health care, including antenatal care, care for sexually transmitted infections, hospitalization, blood screening and primary health care in high burden settings.

In 2007, WHO and UNAIDS issued important recommendations regarding provider-initiated testing and counselling. The guidance advises that health-care providers recommend HIV testing and counselling to all people seen in all health facilities in countries with generalized epidemics, and in selected health facilities in low-level and concentrated epidemics.

## Chapter 4

### HEALTH-SECTOR INTERVENTIONS FOR HIV PREVENTION

While prevention programmes in some countries have succeeded in decreasing HIV prevalence, much more needs to be done: In 2007, 2.5 million people were newly infected with HIV. The health sector must look beyond simply providing HIV treatment, care and support, to playing a much stronger role in the promotion and delivery of HIV prevention services.

### PREVENTING HIV INFECTION AMONG POPULATIONS MOST AT RISK

An estimated 80% of all HIV infections are sexually transmitted. Ten percent of all new infections (and as many as 30% outside of sub-Saharan Africa) are among injecting drug users. Far more needs to be done to develop and expand effective services that will reach the most at-risk populations. These include:

**Sex workers:** A number of Asian countries—notably Cambodia, Myanmar, Thailand and four states in India—have demonstrated that political commitment and appropriate policies, such as the large-scale implementation of prevention strategies targeting sex workers, can result in fewer sexually-transmitted infections (STIs) and declining HIV prevalence among this population. Interventions targeting sex workers in sub-Saharan Africa have also resulted in lower STI and HIV transmission rates.

**Injecting drug users:** Worldwide, an estimated 3–4 million of the 13 million people who inject drugs are living with HIV. Injecting drug use accounts for over 80% of all HIV infections in Eastern Europe and Central Asia—yet, throughout the entire region, needle and syringe programmes regularly reach only 10% of those in need. High HIV prevalence has also been documented among injecting drug users in the Middle East, North Africa, South-East Asia and Latin America.

The presence of needle and syringe programmes can result in marked decreases in HIV transmission, while opioid substitution therapy reduces injecting drug use-related HIV risk and improves access and adherence to antiretroviral therapy.

At the end of 2007, 72 countries had introduced at least one needle and syringe programme, and 58 countries were providing opioid substitution therapy. Despite progress, data suggest that injecting drug users are missing out when it comes to harm reduction programmes.

**Men who have sex with men:** Men who have sex with men (MSM) continue to represent the largest population living with HIV in most high-income countries. Furthermore, increasing evidence points to a resurgent epidemic in North America and Europe among men who have sex with men. Until recently, there has been a lack of international leadership and advocacy to address issues surrounding HIV transmission and access to health services for men who have sex with men. The health sector should include representatives from this population when drafting national health-sector programming priorities, build links with community support organizations, advocate for the decriminalization of same-sex acts and lobby for legislation against discrimination based on sexual orientation.

**Prisoners:** While most prisoners living with HIV contract the virus outside of prison, transmission during incarceration is high owing to the sharing of contaminated injecting equipment and the prevalence of coerced or unprotected sex. A comprehensive 2007 WHO review of HIV prevalence and risk behaviour in prisons provides extensive evidence that needle and syringe programmes, STI treatment, condom distribution, opioid substitution therapy and other drug dependence treatment programmes are feasible and effective. Prisons should be an important focus of health-sector HIV interventions.

### MALE CIRCUMCISION

In 2007, WHO and UNAIDS recommended that male circumcision be recognized as an important additional strategy for the prevention of heterosexually-acquired HIV infection in men in countries with high HIV prevalence and low levels of male circumcision. Three randomized controlled trials in sub-Saharan Africa reported a strong protective effect against HIV acquisition among heterosexual men receiving circumcision, with an approximately 60% reduction in the risk of acquiring HIV. Mathematical models predict that male circumcision could avert two million new HIV infections and prevent 300 000 deaths over the next ten years if widely applied in sub-Saharan Africa.

It is still uncertain exactly how circumcision affects the likelihood of HIV transmission from HIV-positive men to HIV-negative women, or among men who have sex with men. WHO and UNAIDS recommend that men undergo HIV testing and counselling prior to surgery. Circumcision is only recommended for men and boys who are HIV-negative. WHO and partners also recommend that health-care practitioners warn patients that circumcision does not confer 100% protection.

Many high-burden countries are exploring how and whether to scale up male circumcision programmes based on expert consultations.

### PREVENTING HIV TRANSMISSION IN HEALTH-CARE SETTINGS

Within health-care settings, HIV transmission continues to be a serious problem owing to the lack of universal quality-assured screening of blood supplies and to the use of unsafe injection equipment. Sharps injuries are estimated to cause between 200 and 5000 new HIV infections among health-care workers each year, and about 4% of all HIV infections in health-care workers are thought to arise from occupational exposure. Post-exposure prophylaxis (PEP), a WHO-recommended short-term course of antiretroviral therapy designed to reduce the likelihood of HIV infection after potential exposure, is available in 35% of health facilities located in 50 reporting countries.

## Chapter 5

### SCALING UP HIV SERVICES FOR WOMEN AND CHILDREN

Women represent approximately half of all people living with HIV worldwide and more than 60% of people living with HIV in sub-Saharan Africa. An estimated 2.1 million children under the age of 15 years are living with HIV, more than 90% of whom were infected through mother-to-child transmission. Children account for 6% of all HIV infections, 17% of new infections, and 14% of all HIV/AIDS-related mortality.

Every year, an estimated 1.5 million HIV-positive women give birth in low- and middle-income countries. In 2007, approximately 33% of HIV-positive pregnant women received ARVs to prevent HIV transmission to their child, up from 10% in 2004. Between 2004 and 2007, West and Central Africa showed the highest gains with an almost six-fold increase in the number of women receiving ART prophylaxis and a four-fold increase in East and Southern Africa.

Mother-to-child HIV transmission rates have declined dramatically in a number of countries that were once characterized by high rates of maternal transmission. In Cambodia, the estimated mother-to-child transmission declined from 30.5% in 2001 to 11.4% in 2007, and in Rwanda, from 30.5% in 2001 to 8.9% in 2007.

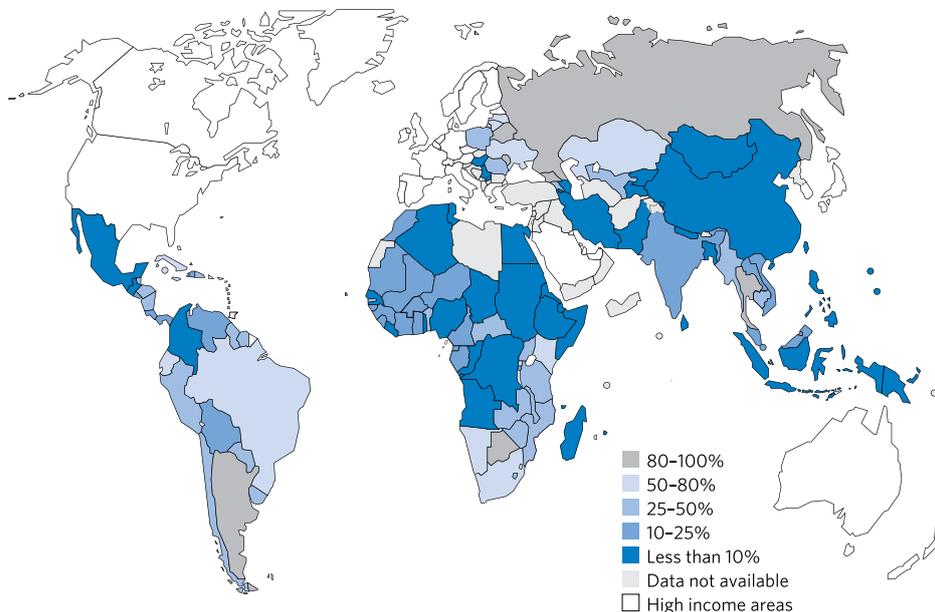
Despite this, many HIV-positive pregnant women are unable to access antiretroviral therapy for their own health in a timely manner because health-care workers tend to focus on preventing transmission to unborn children as opposed to safeguarding the long-term health of the mother. Only about 12% of pregnant women living with HIV were assessed for their eligibility to receive ART in 2007. Quite apart from the negative impact on the health of the women themselves, this lack of long-term ART access contributes to the number of 'AIDS' orphans.

### TREATING CHILDREN

The encouraging progress in scaling up paediatric antiretroviral therapy over the past two years is, in part, attributable to the decreasing cost of paediatric ARVs, the approval of fixed-dose paediatric ARV combinations, and better links between ART services and maternal, newborn and child health services. The number of children receiving antiretroviral therapy increased from about 75 000 in 2005 to nearly 200 000 in 2007.

Early, accurate diagnosis is necessary to ensure that newborns receive treatment and care. However, only 8% of infants born to HIV-positive mothers in 2007 were tested within the first two months of birth in countries with available data.

Coverage of antiretrovirals to prevent mother-to-child transmission of HIV in low- and middle-income countries, 2007



A major impediment to early diagnosis is inadequate access to virological testing, which requires more sophisticated and expensive equipment than is currently available in most high-prevalence countries.

Co-trimoxazole, a highly effective and affordable antibiotic, has been shown to substantially reduce morbidity and mortality among infants and children who are exposed or infected with HIV. In 2007, less than 4% of children born to HIV-positive pregnant women had received co-trimoxazole by two months of age. Greater efforts are needed to make co-trimoxazole widely available and to provide guidance to health-care providers.

## Chapter 6

### STRENGTHENING HEALTH SYSTEMS AND HEALTH INFORMATION

WHO has identified six essential elements of health-care systems that need strengthening to support the scale-up of HIV prevention, treatment and care. These are: service delivery; health workforce; health information; medical products; vaccines and technologies; and leadership and governance.

#### HEALTH WORKFORCE

The 2006 WHO World Health Report pointed to a worldwide shortage of 4.3 million doctors, nurses and midwives. Sub-Saharan Africa is the worst affected with a shortage of nearly 1 million health-care workers. While many health-care workers migrate elsewhere for better wages and working conditions, others fall victim to HIV-related illnesses and death—in some high-prevalence countries, up to 20% are 'lost' in this manner. Providing ART to health-care workers is clearly a key priority in heavily affected countries.

In 2007, WHO, Member States and international partners developed a plan to address the health workforce crisis through three interventions:

- **Treat:** provide a comprehensive package of HIV interventions to health-care workers;
- **Train:** promote task-shifting where appropriate. This means shifting specifically designated tasks from highly qualified health workers to less specialized, but trained, health workers;
- **Retain:** encourage health-care workers to remain in the system by improving occupational health and safety, providing financial and non-financial incentives to remain in the health workforce, and introducing measures to address health worker migration.

Specifically, WHO and partners have targeted the following areas for health system strengthening:

#### TASK SHIFTING

In 2007, 28 of 73 low- and middle-income countries had developed policies to shift tasks from health-care workers to trained non-professional workers. A recent South African study found that after six months of follow-up, outcomes such as virologic suppression, adherence, and retention of patients at sites with doctors were similar to those at sites without doctors.

#### PROCUREMENT AND SUPPLY MANAGEMENT

Many health systems are undermined by weak procurement and supply management systems. This has resulted in frequent shortages (stock-outs) of ARVs and other essential commodities. Of 66 low- and middle-income countries surveyed, 25 reported one or more stock-out of key ARVs. In these countries, fully 18% of all reporting treatment sites experienced at least one ARV stock-out in 2007.

#### SURVEILLANCE AND MONITORING

A recent evaluation of data collection and surveillance systems found that 56 of 137 low- and middle-income countries had fully implemented surveillance systems; 32 had partially implemented them and the remaining 49 countries had systems in place, albeit poorly performing ones. Overall, this represents only a slight improvement in the quality of surveillance systems worldwide.

## Chapter 7

### TOWARDS UNIVERSAL ACCESS: THE WAY FORWARD

Overall, progress towards scaling up the health sector response to meet universal access targets for HIV prevention, treatment, care and support has accelerated. Nevertheless, despite the current rate of scale-up, few countries are on course to meet the 2010 universal access goal or the 2015 Millennium Development Goals. To achieve these, countries and partners must focus on:

- **Strengthening the role of the health sector in HIV prevention:** This means scaling up the implementation of proven preventive interventions such as male circumcision, harm reduction strategies, condom use, safe blood supplies and the integration of HIV prevention into TB, reproductive and maternal health programming. It also means targeting at-risk populations such as sex workers, injecting drug users, prisoners and men who have sex with men with evidence-based prevention services tailored specifically to their needs.

Patients and health-care personnel still continue to face unacceptable risks in hospitals and in other health-care settings. Countries need to ensure universal precautions against HIV infection, the screening of blood supplies and the implementation of safe injection practices. Infection control strategies to prevent TB infection also need to be scaled up.

- **Increasing awareness of HIV status:** Universal access will never be achieved unless more people are made aware of their status. Provider- and client-initiated testing and counselling represent a critical opportunity to expand ART coverage and to access prevention services and other interventions.
- **Strengthening and sustaining efforts to scale up HIV treatment and care:** Low- and middle-income countries must continue to provide lifelong access to those now receiving ART and to expand services to the many millions of individuals in need. This includes at-risk populations such as injecting drug users, prisoners, men who have sex with men, sex workers and their clients and hard-to-reach rural populations. International partners need to support and encourage high-prevalence countries to adopt a public health approach based on simplified clinical decision-making, standardized regimens and decentralized and integrated service delivery.

This must also include greater efforts to ensure timely access to ART. Patients should be encouraged to remain in treatment and be regularly monitored for signs of resistance as well as TB infection. Reducing the cost of second-line regimens should also be a priority. Expanding access to co-trimoxazole prophylaxis to all infected adults, including HIV-exposed infants, and to services to prevent and treat TB is essential.

- **Accelerating access to HIV prevention and care for women and children:** Maternal, newborn and reproductive health services are a critical entry-point into HIV prevention, treatment and care programming. High rates of antenatal care coverage offer an excellent opportunity to expand provider-initiated HIV testing and counselling. More HIV-positive pregnant women must also be assessed to determine whether they need antiretroviral therapy for their own health, and if necessary, a referral for treatment services. The difficulty of diagnosing HIV in infants is also hampering progress.
- **Overcoming health system weaknesses:** HIV programmes can strengthen health systems provided that they are appropriately integrated with other health services and aligned with national health-care planning. Countries need to train more health-care workers, decentralize service delivery and address worker shortages through task-shifting and other approaches.
- **Improving strategic information to guide the health-sector response:** Although the availability and quality of epidemiological data is improving, more investment and analysis are needed. This includes expanding data relating to HIV incidence, testing and counselling, sexually-transmitted diseases, and access to health services for populations most at-risk. More data regarding the impact of HIV interventions on mortality, incidence, prevalence and the health system should also be a priority.

## Conclusions

- Nearly a million more people (950 000) were receiving ART in low- and middle-income countries by the end of 2007 compared to the end of 2006, bringing the total number of those receiving treatment to approximately 3 million — a seven-fold increase in just four years.
- The '3 by 5' target of 3 million living in low- and middle-income countries receiving treatment by the end 2005 has been achieved — albeit two years late. This underscores the necessity and utility of setting targets and working towards them.
- While the availability of HIV testing and counselling in health facilities increased substantially between 2006 and 2007 in countries with comparable data, the majority of people living with HIV/AIDS are still unaware of their status, meaning they remain unable to access prevention, treatment and care services. Although global data are unavailable, surveys undertaken in 12 high-prevalence countries reveal that the median percentage of HIV-positive people who know their status is only 20%.
- Improved follow-up of those individuals diagnosed with HIV and greater access to care, beyond access to ARVs, are required to maximize the health of people infected and help prevent HIV transmission to others.
- Successful examples of HIV prevention among high-risk populations such as injecting drug users, men who have sex with men, prisoners, and sex workers and their clients, highlight the need to further scale up access to prevention interventions, to strengthen surveillance and monitoring, and to ensure that policies and legislation create an environment that encourages effective health-service delivery.
- In 2007, 33% of HIV-positive pregnant women received antiretrovirals to prevent transmission to their children, as compared to 10% in 2004. That same year the number of pregnant women tested for HIV worldwide rose to 18% from 16% in 2006 and 10% in 2005.
- Today, more children are accessing care and treatment services than in previous years. In 2007, 200 000 children living with HIV received antiretroviral therapy, as compared to 127 000 in 2006 and 75 000 in 2005. However, the difficulty of diagnosing HIV in infants remains an obstacle to further gains.
- Despite substantial progress in 2007, most low- and middle-income countries are still far from achieving universal access goals. Obstacles include weak health-care systems, a critical shortage of human resources and a lack of sustainable, long-term financing. Countries also require monitoring systems in order to track progress and increase the effectiveness and impact of HIV programmes.