

Progress in numbers

The last six months have seen dramatic progress toward the “3 by 5” target. Between June and December 2004, the number of people receiving antiretroviral (ARV) therapy in developing and transitional countries increased to approximately 700 000 (low estimate 630 000, high estimate 780 000) (Fig. 1). The upward trend was driven especially by countries in sub-Saharan Africa, where the number of people receiving ARV therapy doubled.

The figure of 700 000 represents about 12% of the estimated 5.8 million adults who currently need ARV therapy in developing and transitional countries. It includes people receiving ARV therapy supported by national programmes, nongovernmental organizations, the private sector, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the United States President’s Emergency Plan for AIDS Relief, the World Bank and other partners.

Fig. 1. Number of people receiving ARV therapy in developing and transitional countries by region, 2002–2004

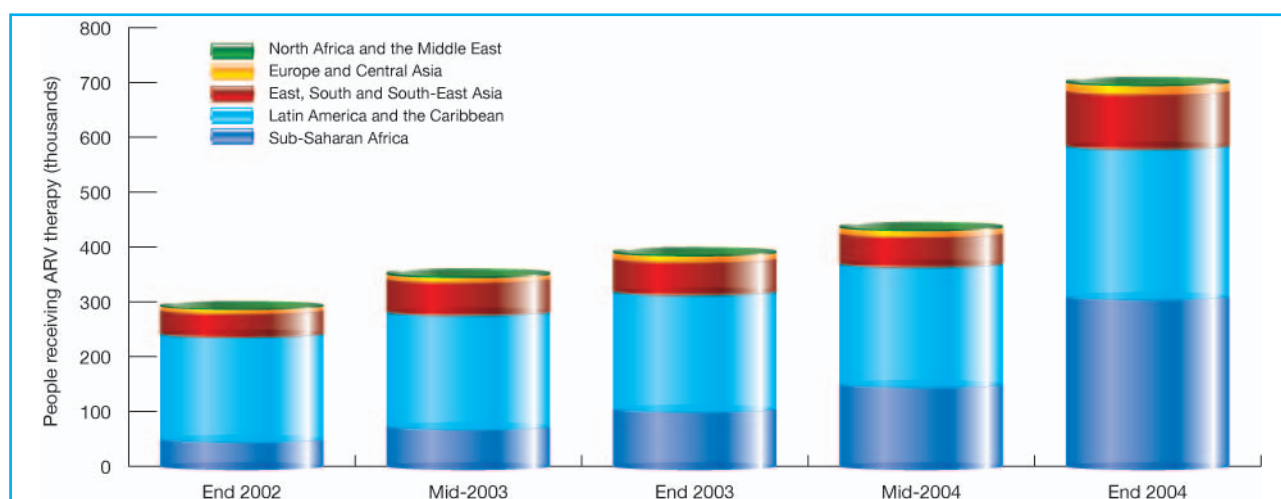


Table 1. Estimated number of people receiving ARV therapy, people needing ARV and percentage coverage in developing and transitional countries by region, December 2004^{a,b}

Geographical region	Estimated number of people receiving ARV therapy, December 2004 (low estimate–high estimate) ^c	Estimated number of people 15–49 years old needing ARV therapy, 2004 ^d	ARV therapy coverage, December 2004 (%) ^e	Estimated number of people receiving ARV therapy, June 2004
Sub-Saharan Africa	310 000 [270 000–350 000]	4 000 000	8%	150 000
Latin America and the Caribbean	275 000 [260 000–290 000]	425 000	65%	220 000
East, South and South-East Asia	100 000 [85 000–115 000]	1 200 000	8%	55 000
Europe and Central Asia	15 000 [13 000–17 000]	150 000	10%	11 000
North Africa and the Middle East ^f	4 000 [2 000–6 000]	55 000	7%	4 000
Total	700 000 [630 000–780 000]	5.8 million	12%	440 000

Note: numbers do not add up due to rounding.

^a Annex 1 explains the methods used and also includes a table with the same data according to WHO region. Annex 2 includes the country-level data.

^b All countries except those in western Europe and Australia, Bahamas, Bahrain, Brunei, Canada, Cyprus, Grenada, Israel, Japan, Kuwait, New Zealand, Qatar, Republic of Korea, Singapore, United Arab Emirates and United States of America.

^c A few countries report the number of children younger than 15 years of age receiving ARV therapy, and they have been included in this table. Preliminary data show that, overall, less than 5% of the total number receiving ARV therapy are children younger than 15 years of age.

^d The figure presented is the midpoint of the low and high estimates of the number of AIDS deaths and the number of AIDS cases. The needs estimates are based on the methods described in Annex 1. Estimates for individual countries may differ according to the local methods used.

^e This is a best coverage estimate based on the midpoints of the number of people receiving ARV therapy and the estimated need for ARV therapy.

^f Except for Turkey, no updates have been received from this region since June 2004.

Several African countries have made enormous progress during the second half of 2004. The number of service delivery points for ARV therapy has increased to well over 700, leading to a sharp rise in the numbers of people starting treatment. The number of people receiving treatment in Botswana, Kenya, South Africa, Uganda and Zambia increased by more than 10 000 in each country. Botswana, Namibia and Uganda now have an estimated ARV therapy coverage that exceeds one quarter of all people needing treatment, and 13 countries in the region have exceeded 10% coverage. Nevertheless, overall coverage in sub-Saharan Africa remains low, at about 8% (Table 1, for WHO Regions see Annex 1).

In East, South and South-East Asia, the numbers of people receiving treatment also increased rapidly, from about 50 000 in June 2004 to 100 000 in December 2004 (Table 1). Thailand accounts for most of the increase. The numbers of people receiving treatment in Latin America and the Caribbean continued to increase steadily to 275 000, which is estimated to be about two thirds of all people in need. Brazil alone reported 154 000 people receiving treatment by December 2004.

Countries in Europe and Central Asia reported modest increases to reach 15 000 people receiving treatment. Countries in North Africa and the Middle East reported little new information (Table 1). The numbers for these countries were therefore kept at the June 2004 level in the global totals, although efforts to enhance access to treatment are increasing.

Estimating the numbers of people receiving ARV therapy

The global figures are powerful and reassuring indicators of progress. We are confident that the current figures are of much greater quality than any previous data on ARV therapy, but they must be read against a backdrop of systems for monitoring the people receiving ARV therapy that are still being adapted to local conditions in many places. The numbers are based on data reported by countries in written reports or through personal communication with key informants. The data have been checked against other sources, such as reports by donors or nongovernmental organizations, and all efforts have been made to avoid double counting.

Ideally, country reports should distinguish between people initiating ARV therapy, people who do not adhere to treatment and those who have died. For instance, Botswana reported that 21 267 people had initiated treatment in public clinics between January 2002 and September 2004 but 1761 (8%) of these had died. This level of detail has been difficult to achieve in some countries that are still in the process of building their monitoring systems.

Measuring the ARV therapy provided in the private sector is difficult. Many people receive their drugs through local pharmacies and private clinics that seldom report their activities to the government. Many private companies have programmes supporting ARV therapy for workers with advanced HIV infection that are not included in the estimates. An example of good practice is again Botswana, where it is reported that nearly one quarter of the people receiving ARV therapy get it through the private sector. In many instances however, people attending health facilities outside the public sector are not recorded in official statistics.

There is also a time lag between global reporting, which is for the end of 2004, and country reporting, which usually relates to an earlier point in time. Given the current rapid expansion in numbers, trends must be estimated and projected to a standard time period. Thus, the estimates for the end of 2004 are based on simple linear projections of reported numbers using the current trend as an indicator of growth and taking mortality into account.

Consequently, the global estimate is likely to be lower than the actual number on treatment because all the evidence indicates very rapid scaling up of both the numbers of sites and the numbers receiving treatment. Because the overall estimates by country are uncertain, Annex 1 and 2 indicate low estimates and high estimates. The number of people receiving ARV therapy is estimated to lie between 630 000 and 780 000. The Annexes also explain in detail how the numbers of people on treatment and those needing treatment were derived.

Treatment works

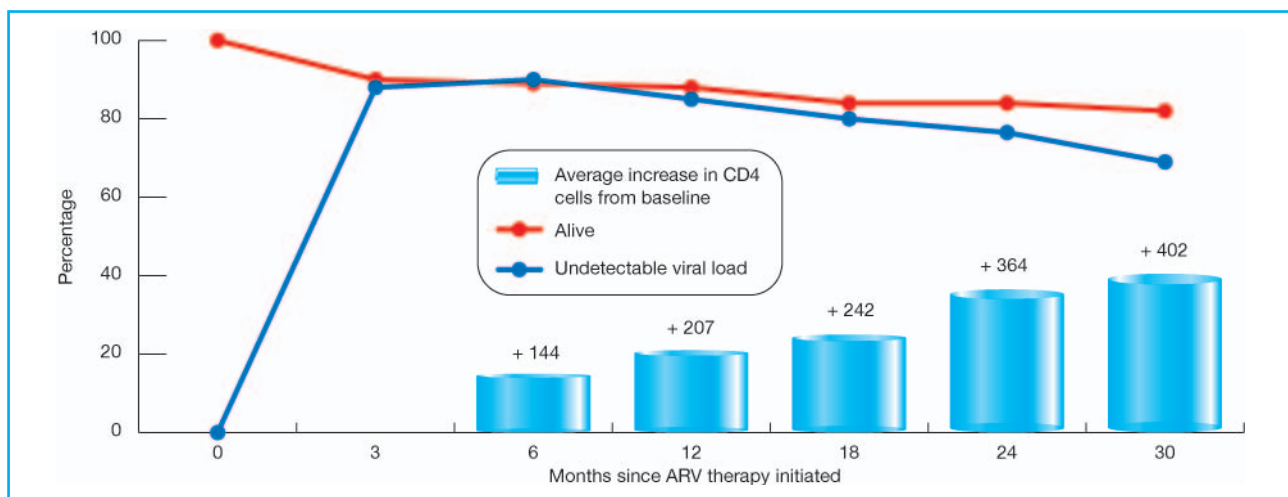
Overwhelming evidence from several national programmes and individual treatment centres indicates that highly active triple-drug therapy for HIV/AIDS can be delivered effectively. For years, most of the examples of successful treatment programmes came from industrialized countries. Brazil has clearly shown that a

middle-income country can also deliver ARV therapy through the public sector and thereby achieve universal access to treatment with excellent results.¹ These precedents offer inspiration to people around the globe that political will can make treatment a reality in developing and transitional countries.

Many have questioned whether such treatment effectiveness can be achieved in resource-constrained regions with a far higher burden of HIV/AIDS, that require a less physician-oriented and more standardized public health approach. New data now show, however, that a public health approach to ARV therapy can yield exceptional results in many developing countries.

Adherence rates have been consistently high in the vast majority of demonstration projects and start-up services. For example, self-reported adherence to treatment in a community-based ARV therapy programme initiated by Médecins Sans Frontières (MSF) in Khayelitsha township in Cape Town, South Africa demonstrated that 90% of those receiving therapy take more than 95% of their medication² (Fig. 2). An initiative sponsored by the Government of Senegal has maintained good (80–90%) adherence over two to three years.³

Fig. 2. Success of ARV therapy in Khayelitsha, Western Cape, South Africa, 2002–2004



More importantly, empirical data show that treatment works to the same degree observed in Europe and the United States when triple combination therapy was first used. In Entebbe, Uganda, more than 90% of those with CD4 counts below 200 are alive after 15 months of ARV therapy.⁴ Only 50% of a group of adults with similar levels of immune suppression without access to ARV therapy were alive after 15 months (Box 1). Botswana has reported similar survival rates (91%) after 15 months of treatment.

In Khayelitsha and in Senegal, 80% of the people receiving ARV therapy are alive after 30 months of follow-up.⁵ The overall probability of survival of almost 7000 people receiving ARV therapy in clinics supported by MSF in several countries after 24 months of treatment was 85%.⁶ The effects of treatment on immunity and viral load are comparable to those of treatment programmes in industrialized countries. Botswana, for example, reported that 85% of the people receiving ARV therapy had complete viral load suppression at six months. At 15 months, their average weight increased 10 kg and their average CD4 count increased by 220.⁷

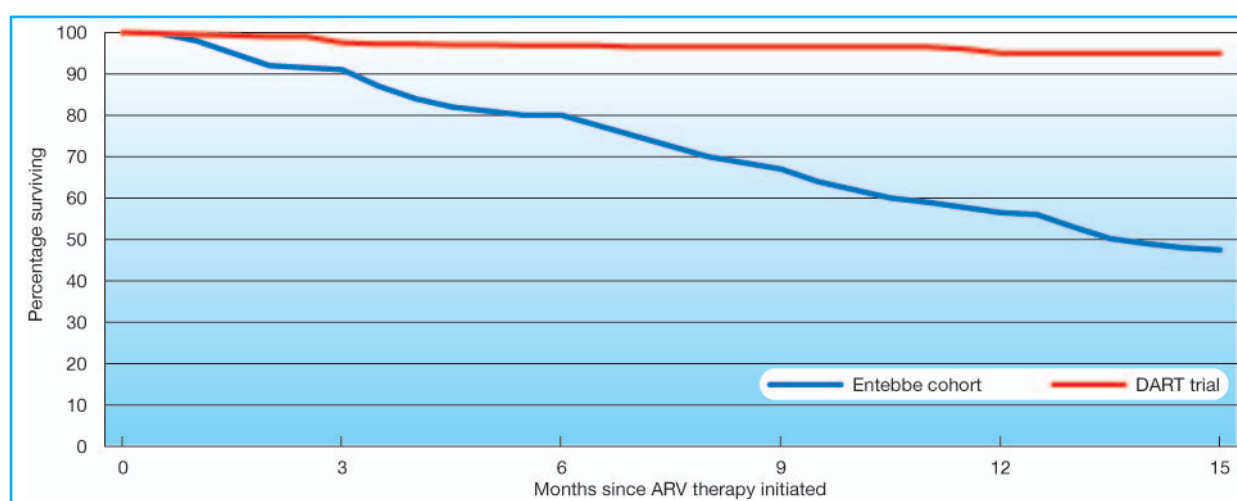
¹ Marins JRP et al. Dramatic improvement in survival among adult Brazilian AIDS patients. *AIDS*, 2003, 17:1675–1682.
² Coetzee D et al. Outcomes after two years of providing antiretroviral treatment in Khayelitsha, South Africa. *AIDS*, 2004, 18:887–895. Goemaere E et al. Evolving experience after three years of ART in Khayelitsha. *MedGenMed*, 2004, 6(3) [eJIAS, 2004, 11(1): ThPeB7249] (http://www.iasociety.org/ejias/show.asp?abstract_id=2169310, accessed 31 December 2004).
³ Laurent C et al. Long-term benefits of highly active antiretroviral therapy in Senegalese HIV-1 infected adults. *Journal of AIDS*, 2005, 38:14–17.
⁴ Data provided by the Development of Antiretroviral Therapy in Africa (DART) team in Uganda.
⁵ See notes 2 and 3.
⁶ Data provided by MSF office in Geneva, Switzerland, combining the data reported for sites in 27 countries.
⁷ De Korte D et al. *Introducing ARV therapy in the public sector in Botswana. Case study*. Geneva, World Health Organization, 2004 (http://www.who.int/hiv/pub/prev_care/botswana/en, accessed 31 December 2004).

Box 1. Successful treatment in Entebbe, Uganda

In Entebbe, Uganda, many adults with HIV/AIDS have given consent and participated in trials of interventions to reduce morbidity and mortality. Some interventions such as isoniazid and co-trimoxazole prophylaxis were effective. Others, such as vaccination against *Pneumococcus* spp., the commonest cause of bacterial pneumonia, were not. The overall survival of the people in the Entebbe cohort who had a CD4 count below 200 was poor and similar to that seen in the early days of the HIV/AIDS epidemic in the United States.

Since January 2003, ARV therapy has been available through the DART (Development of Antiretroviral Therapy in Africa) trial – and more than 1050 people with CD4 counts below 200 have commenced triple-drug therapy. Survival has improved dramatically. Instead of 50% mortality after 15 months of follow-up, more than 90% of trial participants on ARV therapy are still alive, and most have resumed normal activities (Fig. 3).

Fig. 3. Survival of people receiving ARV therapy through the DART trial versus the people in the Entebbe cohort receiving other interventions, Entebbe, Uganda, 2004^a



^a DART: Development of Antiretroviral Therapy in Africa.

The challenges of ensuring access

Ensuring access to care and treatment is the cornerstone of “3 by 5”. This presents enormous challenges, and one of the first steps is to develop information systems that adequately monitor gender equity and resources to serve poor and marginalized people.

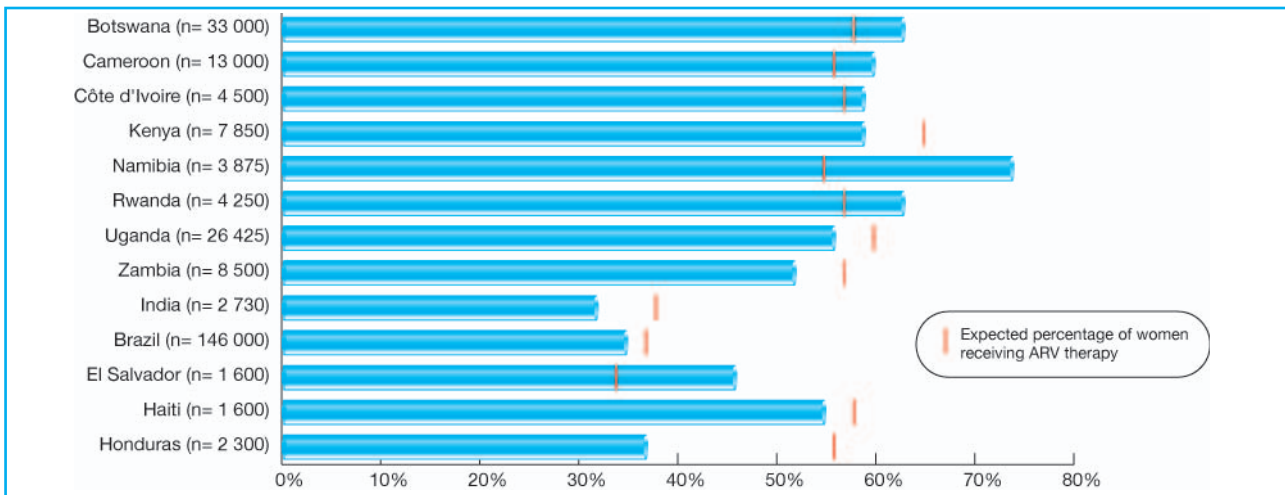
The *AIDS epidemic update 2004* by UNAIDS and WHO⁸ highlights the need to address issues related to women and girls, in terms of both prevention and treatment. In developing countries, 17.2 million women are living with HIV/AIDS; 48% of the adults living with HIV/AIDS are women. In sub-Saharan Africa, women account for 57% of the adults living with HIV/AIDS. Treatment needs may differ, depending on the epidemic stage and course, but those receiving ARV therapy should ultimately reflect these same proportions.

Although many countries do not report treatment figures by gender, data are available from a number of countries or sites in Latin America, the Caribbean and sub-Saharan Africa. Fig. 4 compares the proportion of adults receiving treatment who are women with the expected proportion based on the HIV prevalence.

The figures indicate that women and men are about equally represented in treatment populations in most countries. In Namibia, however, more women are benefiting, whereas in Honduras, and to a lesser extent India, women are underrepresented. It is critical to step up the monitoring of access and utilization to ARV therapy programmes by gender.

⁸ UNAIDS and World Health Organization. *AIDS epidemic update 2004*. Geneva, UNAIDS, 2004 (<http://www.unaids.org/wad2004/report.html>, accessed 31 December 2004).

Fig. 4. Percentage of adults receiving ARV therapy who are women versus the expected percentage, country or site reports, 2004^a



^a The expected percentage of women receiving ARV therapy is based on the percentage of people living with HIV/AIDS who are women.

Other dimensions of equity also need to be monitored, and access for poor people is of particular concern. Initially, new treatment programmes will be rolled out in urban areas where human resources and infrastructure are in place. It is important to ensure that rural populations can access care while care and treatment systems are being developed and implemented in their communities. The expansion of ARV therapy programmes to rural areas will present special challenges, but there are examples of successful rural programmes where community health workers play a key role, such as in Haiti.

Meanwhile, even where services exist they must be within reach for all members of the community. Uptake of ARV therapy increased rapidly after user fees were abolished in Zambia, especially among women, indicating the importance of reducing economic barriers to access.

Another area of concern is access to treatment for marginalized groups, such as sex workers and injecting drug users, men who have sex with men, prisoners and, in some settings, migrants or ethnic minority groups. Brazil and the triangular clinics in Kermanshah, Islamic Republic of Iran⁹ provide good examples of how to address the special needs of injecting drug users. Nevertheless, much more needs to be done to reach this population.

⁹ Oppenheimer E, Hernandez Aceijas C, Stimson G. *Treatment and care for drug users living with HIV/AIDS*. London, Centre for Research on Drugs and Health Behaviour, Imperial College, 2003 (http://www.ahrn.net/img/document/Treatment_care_for_DUs.pdf, accessed 31 December 2004).