Goal 6: Combat HIV/AIDS, malaria and other diseases

Africa’s progress in the fight against HIV/AIDS, TB and malaria is being sustained – even stepped up. This is noteworthy as there are worrying signs of regress in other developed and developing regions of the world, particularly for HIV/AIDS. The number of people in Africa living with HIV has increased owing to improved coverage of antiretroviral therapy (ART). Infections, too have fallen: the decrease in young women’s prevalence (15–24 years) is particularly encouraging.

The fight against malaria is seeing major advances. Increases in funding and attention to malaria control have led to a 20 per cent global decline in the number of malaria deaths in 2000–2009. Africa (excluding North Africa) made a large contribution to this steep drop through critical interventions such as greater use of insecticide-treated nets (ITNs) and artemisinin-based combination therapies, as well as adequate financing.

The Global Plan to Stop TB is also bearing fruit. Improved ART coverage and the decline in HIV infection rates have also reduced TB infections, given the opportunistic nature of the disease.

The Global Fund, the Abuja Declaration, Stop TB, the African Leaders’ Malaria Alliance, and an update of the Roll Back Malaria partnership in June 2011 are just a few of the international and regional initiatives that show the high level of political commitment to tackle these diseases. These vertical funds – programmes that target resources at specific health problems, and deliver direct and measurable results – are among the reasons for the outcomes in tackling these three diseases.

In July 2011, following the reduction in HIV prevalence rates and the increase in access to ART, the UN General Assembly set bold new targets with the aim of achieving faster, smarter and better results in the fight against HIV/AIDS, namely through implementing the Global Plan for Elimination of HIV infection in Children and Keeping Mothers Alive (UNAIDS 2011a). Although HIV prevalence data have been regularly updated, the same is not true for data related to behaviour and knowledge on HIV. Indeed, there has not been an update since the 2011 Assessing progress in Africa towards the MDGs report on condom use for high-risk sex, the proportion of population aged 15–24 years with comprehensive knowledge of HIV/AIDS or the ratio of school attendance of orphans to school attendance of non-orphans aged 10–14 years. The main reason is that most data are collected in irregular surveys, and the data-collection cycles vary by country (UNECA et al., 2011).

29 In its Political Declaration on HIV and AIDS: Intensifying Our Efforts to Eliminate HIV/AIDS.
Target 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS

**Pronounced declines in HIV/AIDS**

Africa (excluding North Africa) remains the region most heavily affected by HIV. Although it is home to only 12 per cent of the global population, it accounted for about 68 per cent of all people living with HIV in 2010. The region also accounted for 70 per cent of new HIV infections in 2010, although it showed a notable decline in the rate of new infections. The epidemic remained stable in Western and Central Europe, was increasing in North America, East Asia, Eastern Europe and Central Asia, and was declining in South-east Asia (table 6.1).

More people than ever are living with HIV, largely due to greater access to treatment. In Africa, the number of people dying of AIDS-related causes fell to 1.9 million in 2010, down from a peak of 2.2 million in the mid-2000s. Annual new HIV infections fell by 21 per cent between 1997 and 2010. The number of new HIV infections (the incidence) in Africa (excluding North Africa) has dropped by more than 21 per cent, down to 1.9 million, from an estimated 2.6 million at the peak of the epidemic in 1997. HIV has fallen in 21 African countries, the continent most affected by the AIDS epidemic. Declines have been steep, particularly in countries with the highest number of infected people, including Ethiopia, Nigeria, South Africa, Zambia and Zimbabwe. The decrease in the incidence is particularly noteworthy in South Africa, which remains the country with the highest number of infected people in the world; the annual HIV incidence in the country, though still high, dropped by a third during 2001–2009, from 2.4 per cent to 1.5 per cent.

The epidemic remains most severe in Southern Africa, followed by East Africa, Central Africa and West Africa. One third of all people living with HIV globally resided in 10 countries in Southern Africa.31 North Africa is still the sub-region least affected by HIV/AIDS. The epidemic is becoming generalized in countries like Djibouti and South Sudan, where it has so far been concentrated among high-risk groups.

**Indicator 6.1: HIV prevalence among population aged 15–24 years**

Recent estimates by UNAIDS show that HIV prevalence declined among young people (aged 15–24 years) in at least 21 of 24 African countries with a national HIV prevalence of 1 per cent or more. The drop in HIV prevalence was statistically significant in sentinel sites in Botswana, Burkina Faso, Republic of Congo, Ethiopia, Ghana, Kenya, Malawi, Nigeria, Namibia, Tanzania, Togo and Zimbabwe. Four of those countries (Botswana, Malawi, Tanzania and Zimbabwe) also had statistically significant declines in the general population, according to results from population-based surveys. In addition, a statistically significant decline in prevalence in the general population was observed in Lesotho, South Africa and Zambia (UNAIDS 2011).

**Declining HIV infection and prevalence among young women**

Particularly interesting is the fall in HIV incidence among young women. From 2001 to 2010, HIV incidence among adult women in Africa (excluding

31 Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.
North Africa) has declined from 0.72 per cent to 0.49 per cent, while adult HIV incidence declined considerably during the same period in several of the priority countries (including Botswana, Côte d’Ivoire, Namibia and Zimbabwe) where they fell by at least 50 per cent. Furthermore, young women’s prevalence decreased from 5.2 per cent to 3.3 per cent during 2001–2010 (table 6.1), partly driven by improved education for girls, which may be the single most effective preventive weapon against HIV/AIDS (World Bank, 2002). This also augurs well for positive effects on other indicators such as TB incidence and mother-to-child transmission of HIV/AIDS.

The increase in ART has also been driven by a request for HIV screening of all TB patients by many countries, allowing swift treatment while ensuring anonymity and voluntary screening. This led to an increase in the proportion of TB patients screened for HIV from 11 per cent in 2005 to 59 per cent in 2010. The proportion of HIV-positive TB patients accessing ART rose from 29 per cent to 42 per cent in the same period (WHO, 2011a).

One in every 10 African women becomes a mother before the age of 19. Hence the declining prevalence of HIV infections among young women is likely to result in a steep decline in mother-to-child transmission. This trend is likely to improve further as more women take advantage of voluntary HIV testing. In 2010, an estimated 35 per cent of pregnant women in low- and middle-income countries (most of them in Africa) took an HIV test, compared with 8 per cent in 2005 and 26 per cent in 2009.

Indicator 6.2: Condom use at last high-risk sex

Condom use is on the rise in high-prevalence countries, but geographical and gender disparities persist

No new data have appeared since the previous 2011 report. Condom use during high-risk sex is still low among young people (15–24 years of age) in many regions.
age) in developing regions. From the latest survey data, ranging from 2005 to 2009, fewer than half of young men and just over a third of young women used condoms during their last high-risk sexual activity in Africa (excluding North Africa) (UN, 2011). The scant information shows that high-prevalence countries have improved condom use, but large intra- and inter-country disparities persist. In Zimbabwe, for instance, an estimated 68 per cent of young men used condoms versus 42 per cent of young women. Similar to other health services, the gender gap is exacerbated by income and locational inequities – condom use is much less common among young people in poorer households and those living in rural areas (UNAIDS, 2011b).

The use of condoms in high-risk sex situations is based also on the knowledge of HIV transmission and prevention. Although data are scant, population-based surveys in selected African countries (excluding North Africa) indicate that the proportion of young people who know that using condoms can reduce the chances of getting HIV ranges from about 50 per cent to almost 90 per cent, although with a geographical and gender bias (as seen in other MDGs). In almost all the countries, young women are less likely than men to have such knowledge. Youths in rural areas are also less likely to know about prevention (UNAIDS, 2011b).

In some countries with generalized epidemics, a combination of behaviour changes (including reduction in number of sexual partners), increases in condom use and delayed age of first sex have reduced new infections. In urban Zimbabwe, for example, a huge decline in HIV incidence, from an extremely high peak of almost 6 per cent in 1991 to less than 1 per cent in 2010, paced encouraging changes in sexual behaviour among young people, including a reduction of the proportion of young men with multiple partners and an increase in the proportion of young people claiming to have used a condom the last time they had high-risk sex. Similarly, the percentage of young men and women who have had sex before their 15th birthday fell significantly in eight of the 18 countries with sufficient data (UNAIDS, 2011).

**Target 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it**

**Indicator 6.5: Proportion of population with advanced HIV infection with access to antiretroviral drugs**

**Improved access to treatment is a winning strategy**

Universal access to treatment for HIV/AIDS (defined as 80 per cent or greater coverage) shows crucial progress. Worldwide, the most dramatic increases in ART coverage have been made in Africa (excluding North Africa), with a 20 per cent increase from 2009 to 2010 alone (UNAIDS 2011b). In low- and middle-income countries, 47 per cent of the 14.2 million eligible people living with HIV were on ART at the end of 2010, up from 39 per cent a year earlier. Universal access to treatment has been achieved in Botswana, Comoros, Namibia, South Africa and Swaziland (>95 per cent), Lesotho (89 per cent), and perhaps Zambia (70–80 per cent) (figure 6.1).

UNAIDS estimates that access to HIV/AIDS treatment has averted 2.5 million AIDS deaths between 1995 and 2010 in low- and middle-income
countries globally, mostly through falling mother-to-child transmission (UNAIDS, 2011b).

*Mother-to-child transmission is declining*

Eliminating mother-to-child transmission of HIV/AIDS is challenging because it requires agencies to identify nearly all pregnant women living with
HIV. The rate of such transmission is estimated to have declined from 35 per cent in 2001 to 29 per cent in 2009 and to 26 per cent in 2010. It is also estimated that more than 350,000 new infections among children have been averted since 1995 owing to the provision of antiretroviral prophylaxis to HIV-positive pregnant women (UNAIDS, 2011b).

Coverage of HIV testing and counselling services – a key factor in reducing this mode of transmission – has risen in almost all sub-regions, including East and Southern Africa (where HIV testing coverage rose from 52 per cent to 61 per cent from 2009 to 2010). Among the 21 priority countries in Africa, coverage of HIV testing and counselling services exceeded 90 per cent in Botswana, South Africa, Zambia and Zimbabwe in 2010. Another five countries have reached more than 80 per cent coverage: Kenya, Mozambique, Namibia, Swaziland and Tanzania. Against this, fewer than 20 per cent of pregnant women living with HIV were identified in Chad, DRC and Nigeria.

Coverage of HIV testing and counselling services across Africa’s sub-regions usually reflects the severity of the HIV/AIDS epidemic: in 2010 it was lowest at 4 per cent in North Africa, stood at 18 per cent in West and Central Africa, but reached 64 per cent in East and Southern Africa.

Although the most effective strategy for preventing paediatric HIV infections and mortality is blocking mother-to-child transmission, infant antiretroviral prophylaxis coverage remains a concern. Coverage varies hugely among sub-regions, from West and Central Africa’s 14 per cent in 2010 to East and Southern Africa’s 55 per cent in 2009/10 (box 6.1), up from 41 per cent in 2005.

Efforts towards infant antiretroviral prophylaxis are stagnating, however: one year from 2009 to 2010 recorded only a 21 per cent increase in Africa (excluding North Africa), again with variations among sub-regions. Coverage increased in East and Southern Africa by 26 per cent and an estimated 337,000 children were receiving ART there in 2010, but in West and Central Africa coverage grew at a mere 9 per cent, giving just 9,000 more children the therapy.

Many AIDS-related deaths among HIV-infected children can also be avoided through timely provision of care and treatment, and although such services for HIV-exposed and HIV-infected children are expanding in Africa, they remain inadequate.

National plans should leverage opportunities to strengthen synergies with existing programmes for HIV, maternal health, newborn and child health, family planning, orphans and vulnerable children, and treatment literacy. HIV prevention and treatment for mothers and children is more than a single intervention at one point in time in the perinatal period. It should be seen as an opportunity for a longer continuum of engagement in care with other essential health services, without loss of focus on HIV. This would allow powerful synergies across the MDGs, helping to achieve the health-and gender-related targets.

**HIV treatment can boost prevention**

One area for synergy in the fight against HIV/AIDS is the impact of HIV treatment on prevention, and there are early signs that this increase in access to treatment is contributing to the rapid decline in new HIV infections. UNAIDS suggests that the number of new HIV infections is 30–50 per cent lower than it would have been without universal
access to treatment for eligible people living with HIV. However, this finding should not distract attention from preventing transmission of new infections. Combining treatment with prevention has implications for resources that all governments should be ready to accept (UNAIDS 2011b).

**Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases**

Political commitment is a driving factor in reducing malaria and TB. Commitment made by heads of state at African summits covers bolstering institutional responses, strengthening health systems, forging partnerships, mainstreaming health in development plans, mobilizing financial resources and investing in research and development. Forging partnerships and mobilizing resources have been very successful, and to a lesser degree institutional responses.

Malaria is preventable and curable, but the world in 2010 saw over 200 million cases and 650,000 deaths. Most deaths worldwide still occur among children in Africa. Positively, malaria mortality has fallen by more than 33 per cent in the continent since 2000 – much faster than the global rate of 25 per cent – stemming mainly from stronger prevention and control measures.

Because TB is the most common opportunistic infection, controlling its epidemic is closely linked to controlling the HIV epidemic. The number of new cases of TB has fallen and TB prevalence was lower in 2010 than in 2005 in all Africa’s sub-regions.

**Indicator 6.6: Incidence and death rates associated with malaria**

**Control strategies and funding are crucial**

Malaria control shows broadly two positive developments. The first is the reported reduction of global incidence and death rates: the annual number of cases dropped slightly from 233 million in 2000 to 216 million in 2010, of which 174 million (81 per cent) were in Africa, while deaths fell from 985,000 to about 655,000 in 2010, 86 per cent of which were among children under five. The second is that international funding has continued to rise, reaching $2 billion in 2011.
Eight African countries showed a fall of at least half in confirmed cases (or malaria admissions) and in deaths in recent years (Algeria, Botswana, Cape Verde, Namibia, Rwanda, São Tomé and Príncipe, South Africa and Swaziland). Eritrea, Ethiopia, Senegal and Zambia showed reductions of 25–50 per cent. In all countries, the decreases were associated with intense malaria control interventions.

Increases in malaria cases in Rwanda and in São Tomé and Príncipe in 2009 (two countries that had previously reported reductions) are being reversed after intensification of control measures. This highlights the need to build systems for effective surveillance of malaria and to rigorously maintain control programmes even when cases have been reduced substantially. The increase in cases and deaths in Zambia in 2009 has yet to be reversed (WHO, 2011b).

In 2010, 27 countries in Africa adopted the WHO recommendation to provide ITNs for all people at risk for malaria – not only pregnant women and children – and 35 per cent of children under five at risk slept under an ITN. The number of people protected by ITNs in Africa increased from 10 million in 2005 to 78 million in 2010. Malaria programme reviews were conducted in 23 African countries. Updated strategic plans, targeting universal access, were developed in 15 countries (WHO, 2011b).

Vertical funding programmes. This raises issues for sustaining vertical health funding, particularly given declines in development partners’ funding owing to the global financial crisis.

There is a need for African countries to reduce heavy reliance on vertical funding by exploring alternative sources, and by better harmonizing support from other major global health initiatives and bodies such as the Department for International Development, the World Bank’s Booster Program and the Bill & Melinda Gates Foundation.

Another drawback of vertical funding is that it contributes little to capacity building in Africa, and so external finance should be flanked by domestic resources and public–private partnerships to strengthen health systems.

Malaria constitutes 22 per cent of all childhood deaths and its disease burden is estimated at about 1.3 per cent of GDP in countries with high disease rates (WHO, 2011b). The high burden of TB a few years ago meant a loss in productivity of an estimated 4–7 per cent of GDP (AUC et al., 2004). Thus adequately addressing vertical funding has positive repercussions not only for the health of African populations and health systems in general, but socio-economic development more widely.

**Issues with vertical health funds**

The encouraging increase in funding is threatened by the Global Fund’s announcement in November 2011 that Round 11 of funding is to be cancelled for 2012–2016, which could lead to reversals in other vertical funding programmes. This raises issues for sustaining vertical health funding, particularly given declines in development partners’ funding owing to the global financial crisis.


33  A statistical measure indicating loss of years of healthy life through disabling disease in a specified population, as measured in disability-adjusted life years.
Indicator 6.7: Proportion of children under five sleeping under insecticide-treated bednets

**ITNs have helped to lower under-five malaria incidence**

Thanks to increased funding, the share of households owning at least one ITN in Africa (excluding North Africa) is estimated to have risen from 3 per cent in 2000 to 50 per cent in 2011, and many children under five are using them (figure 6.2). The proportion of exposed people protected by indoor residual spraying rose from less than 5 per cent in 2000 to 11 per cent in 2010.

After recent studies identified long-lasting insecticidal nets and indoor residual spraying as the two most powerful means of avoiding malaria infections, WHO now recommends an emphasis on both long-lasting nets and indoor residual spraying rather than just ITNs.

Indicator 6.8: Proportion of children under five with fever who are treated with appropriate antimalarial drugs

**Inequities still mark malaria treatment**

Surveys in many African countries show that the number of people receiving antimalarial medicines is increasing, as well as the proportion of reported suspected cases receiving a parasitological test (35 per cent), with the largest increase among the world’s regions seen in Africa (excluding North Africa) (WHO, 2011b). This progress needs to be sustained to achieve the malaria control targets. Furthermore, inequity in access and use of these medicines needs to be addressed, because populations from rural areas and poorer backgrounds still receive fewer antimalarial drugs than those from urban and richer backgrounds (UNICEF, 2011b).

Detailed analysis of antimalarial treatment shows that artemisinin-based combination therapies still

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**Figure 6.2 Change in share of children under-five sleeping under insecticide-treated bednets, circa 2000 and 2010**


Note: The country data were collected through various surveys and in various years.
account for only a tiny (but rising) share of total treatment in Africa, even though it is a more effective treatment for the disease than chloroquine and/or single therapy treatment (WHO, 2011b).

**Indicator 6.9 Incidence, prevalence and death rate associated with TB**

TB is usually curable. More than 90 per cent of people with drug-susceptible TB can be cured in six months using combinations of first-line drugs. Treatment of multidrug-resistant TB – there are around 0.5 million cases each year globally – is more challenging, requiring the use of second-line drugs that are more costly, cause more severe side effects and must be taken for up to two years. Cure rates for multidrug-resistant TB are also lower, usually 50–70 per cent (WHO, 2011a).

WHO continues to support the rolling out of the Stop TB strategy in Africa. Thirty-six eligible African countries have been supported to access high-quality first-line anti-TB medicines through the Global TB Drug Facility. Twenty-four countries have accessed quality-assured second-line anti-TB medicines through the WHO Green Light Committee mechanism. To assess the burden of drug-resistant TB, 13 countries have completed countrywide TB drug resistance surveys.34

WHO has set targets for all countries to achieve at least a 70 per cent case detection rate and an 85 per cent treatment success rate. The continent is still short of these targets but many countries have made real progress. By 2010, 15 countries had reached the targeted case detection rate;35 by 2008, 20 had achieved the targeted treatment success rate (Global TB Report, 2010);36 and eight had reached both targets by 2010 (WHO, 2011a).37

**Tackling HIV has a positive impact on TB infections**

HIV and TB show a strong association. Evidence from Figure 6.3 suggests that countries with high HIV prevalence always have very high incidence of TB. Over 10 per cent of TB cases are HIV positive. In 2009, TB accounted for one in four deaths among HIV-positive people. Thus TB control largely follows the same path as that for HIV (WHO, 2011a).

TB control is starting to bear fruit in Africa. After a peak in 2005, prevalence rates by 2010 had fallen in all sub-regions, and were lower than in 1990 in all sub-regions except two (figure 6.4). Southern Africa is still the sub-region most affected by TB. The number of new infections is stable in North Africa, which remains the least affected sub-region.

Egypt, Tunisia, Mauritius, Seychelles and Libya had the lowest prevalence in 2010, and Sierra Leone, Togo, Djibouti, South Africa and Swaziland, the highest. Namibia, Botswana, Uganda, Rwanda and Mali recorded the biggest reduction in prevalence after 1990 (WHO, 2011a).

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37 Algeria, Burundi, Ghana, Namibia, Kenya, São Tomé and Príncipe, Tanzania and Zambia.
**GOAL 6 COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES**

**Figure 6.3** TB incidence is closely related to HIV prevalence, selected African countries, 2009

Source: Computations from UNSD, accessed December 2011.

**Figure 6.4** TB prevalence rate per 100,000 population by African sub-region, 1990, 2005 and 2010

Source: Compiled from WHO (2011c).

Note: The data are weighted by the population in each country.
**HIV is not the only driver of TB infections**

In Africa, new TB infections (incidence) are generally decreasing at a slower pace than prevalence rates, unlike HIV and malaria where incidence and prevalence are declining at similar rates. Incidence has, though, increased and prevalence fallen in, for example, Sierra Leone, South Africa, Tunisia and Swaziland (figure 6.5).

TB infection rates depend not only on HIV status and behavioural adaptation, such as condom use or sleeping under ITNs, but also on institutional and socio-economic factors, such as crowded living and working conditions and poor sanitation. They are also driven by inadequate health care access, as well as by, for example, malnutrition, diabetes mellitus, smoking, and alcohol and drug abuse (WHO, 2011c).

Tackling such factors must run alongside reducing HIV prevalence to manage TB incidence, including the socio-economic conditions that give rise to new infections.

The TB death rate in 2010 was lower than in 1990 in all sub-regions except one (figure 6.6). North Africa has the fewest deaths. The biggest drop came from Southern Africa.

**Figure 6.5 Change in prevalence and incidence of TB, 2005–2010, selected African countries**

Source: Computations from UNSD, accessed December 2011.
Conclusions

Africa’s progress towards this goal is encouraging, although the burden of HIV/AIDS, malaria and TB on health systems and populations’ health status is still heavy. Vertical funding has contributed greatly to this progress and to minimizing the impact of related interventions on the health budgets of several African countries, but this very success has had a toll on health resources required to sustain the advances.

And so more has to be done in addressing the capacity and resource gaps of national health systems as well as tackling inequities in access and use, particularly among low-income groups, rural populations and women. The quantity and quality of domestic resources for these three diseases need to be boosted to consolidate and build on the gains, and to provide alternatives to the unpredictability of future vertical funding. An integrated approach to HIV/AIDS, malaria and TB will have positive spillover effects on maternal and child mortality, educational performance and the overall socio-economic development of the continent.