



Progress towards the Millennium Development Goals, 1990-2003

GOAL 6 – Combat HIV/AIDS, malaria and other diseases

In 2003, some 40 million people were living with HIV/AIDS and an estimated 5 million acquired the human immunodeficiency virus (HIV)¹. In the same year, the global HIV/AIDS epidemic killed more than 3 million people. About one million people die each year from malaria and 1.6 million from tuberculosis. Goal 6 calls on the global community to halt and reverse the spread of HIV/AIDS, malaria and other major diseases by 2015.

HIV/AIDS is the greatest long-term health problem in modern history, devastating life in sub-Saharan Africa and threatening social organization and the fabric of life in all regions of the world. Progress towards achieving this goal will save tens of millions of lives and spare enormous suffering to the orphans and families who will be left behind as it continues unabated.

Progress in the fight against HIV/AIDS and the other major diseases will also have a big impact on progress in all other areas. Children who are sick cannot learn at school, mothers who are sick are more likely to give birth to sick children. A sick workforce cannot generate the productivity on which healthy economies depend. Conversely, the success of the other Millennium Development Goals, such as education and environment, will play a key role in achieving goal 6. Education, for instance, is important in preventing the spread of all infectious diseases including HIV/AIDS. Better nutrition helps patients fight off the effects of these illnesses, reducing poverty helps people to afford the medicines and the preventive care they need to deal with ill health.

These diseases slow down development by reducing productivity and income. In the case of HIV/AIDS, for instance, annual GDP is estimated by UNAIDS to drop by 2.6 percentage points in countries with prevalence rates of over 20 per cent.² The total costs (direct and indirect) of malaria for the sub-Saharan region are estimated at over \$2 billion.³ These diseases also increase the financial burden on families because in many poor countries there is no healthcare safety net and investment in public health is very low. For instance, governments in low-income countries spent less than \$5 per person on health expenditures in 1998, down from \$6 in 1990.⁴ The result is that poor people have to pay for medicines out of their own pockets. To a poor family in a developing country, the cost of ill health can be a matter of survival.

[How the indicators are calculated](#)

[Country data](#)



Target 7 - Have halted by 2015 and begun to reverse the spread of HIV/AIDS

HIV/AIDS prevalence

Over twenty years after it was first reported, AIDS has become the most devastating disease humankind has ever faced. HIV/AIDS is by far the leading cause of premature mortality in sub-Saharan Africa and the fourth-biggest killer worldwide.

HIV/AIDS indicator

Levels of the HIV/AIDS epidemic are tracked on the basis of the estimated prevalence rates in the population 15-49. The prevalence is given by the number of HIV/AIDS cases as a percentage of the population in the age group.

In sub-Saharan Africa, there were an estimated 2.4 million AIDS deaths in 2003 and prevalence rates among adults aged 15-49 reached 8.5 per cent, rising to over 30 per cent in some countries. The Caribbean is the second most affected region with prevalence among adults at 2.5 per cent. Several countries in eastern Europe are experiencing among the fastest growing epidemics in the world. In countries of Asia and Oceania, where an estimated 7.4 million people were living with HIV/AIDS in 2003, relatively low national prevalence rates mask localized epidemics that have enormous potential to escalate. Even in high-income countries in north America, parts of western Europe and Australia, rising infection rates in some groups suggest that advances made in treatment and care have not been matched consistently with progress in prevention. This is most evident where HIV is also lodged among marginalized groups of populations such as immigrants and refugees.⁵

Table 18. HIV prevalence, both sexes, end-2002

Regions	Percentage of adults aged 15-49 living with HIV/AIDS ^a
World	1.1
Western Europe	0.3
Eastern Europe and Central Asia	0.7
North Africa and Middle East	0.3
Sub-Saharan Africa	8.5
Latin America	0.6
Caribbean	2.5
North America	0.6
East Asia and Pacific	0.1
South and south-east Asia	0.6
Australia and New Zealand	0.1

Source: UNAIDS/WHO, *AIDS epidemic update 2003*

^a Regions are based on UNAIDS classification.

Gender dimension

HIV/AIDS affects men and women in different ways. 2002 was the first year when it was recognized that the number of adult women living with HIV/AIDS worldwide had surpassed the number of adult men. Indeed, in sub-Saharan Africa, the region most affected by HIV, women are considerably more likely—at least 1.2 times—to be infected with HIV than men. Why are women, especially younger women, more vulnerable than men in regions such as sub-Saharan Africa where heterosexual sex is the primary means of transmission? There is a combination of factors at play: biological (the female reproductive tract is more susceptible to infection), and social (men tend to have more sexual partners than women and women may not be able to insist that men use condoms or abstain from sex, which are the only two widely available means to prevent HIV transmission). These underlying realities of sex and gender must be taken into account in strategies to achieve this target of the Millennium Development Goals.

The impact of the pandemic also has important gender dimensions. Women and girls bear the brunt of caring for sick relatives. Finally, women may not have the money or the independence within the household to pay for and take drugs to prevent mother-to-child transmission of HIV/AIDS.

Tracking HIV prevalence in young people and high-risk groups

In countries with generalised epidemics, the prevalence of HIV infection is tracked among pregnant women, especially in the young age group (15-24 year olds). Trends in HIV prevalence among young pregnant women over the past several years show that in most countries, infection rates are still not falling.

Data are currently available for about 20 countries, 19 of which are in sub-Saharan Africa, for the period 1999-2002, and are derived from national surveillance of antenatal clinics and, in a minority of cases, from household surveys. Data obtained from antenatal clinic sites in eight of these countries show HIV prevalence leveling off at almost 40 per cent in sites in Botswana and Swaziland, almost 16 per cent in Malawi and 20 per cent in Zambia. Sustained prevention programmes in some countries—principally Senegal and Uganda—have demonstrated that HIV/AIDS can be controlled. Greater, sustained prevention efforts are required in the other countries.

In the African countries with surveillance data, the median prevalence among pregnant women is generally higher in major urban areas than outside.

In other parts of the world, HIV infections are concentrated among sub-populations that are at particularly high risk. These groups include injecting drug users, men who have sex with men, sex workers, migrants and other groups. In many countries, HIV prevalence rates among injecting drug users are high and in several countries of Asia and Eastern Europe they are on the increase. Among sex workers, although several countries have seen declines in HIV prevalence as a result of successful prevention programmes, other countries in different regions see rising prevalence rates. Most developing countries have insufficient data to be able to assess trends among men who have sex with men.

Progress in prevention

A fundamental part of the prevention strategy is educating people about the risks of HIV/AIDS infection. Yet, most young people do not know that they carry the HIV virus. Millions more know too little about how HIV is transmitted and how to protect themselves against it. Those young people who do know how to protect themselves, often lack the skills and the means to do so.

Indicators of knowledge and prevention of HIV/AIDS

Progress made in preventing the spread of HIV/AIDS are assessed by tracking the percentage of young people who know basic facts about HIV/AIDS—that a healthy looking person can be infected with HIV/AIDS and that consistent use of condoms can prevent transmission of the virus—and the percentage of women who use condoms during unsafe sex, to protect themselves from becoming infected.

Table 19. Knowledge and prevention of HIV/AIDS, 1996/2001^a

Regions	Percentage of women aged 15-24 who know that a healthy looking person can be infected with HIV/AIDS	Percentage of women aged 15-24 who know that a condom can prevent the transmission of HIV	Percentage of women aged 15-24 reporting the use of condom during high risk sex ^b
Sub-Saharan Africa	51	49	21
Latin America/Caribbean	77	-	36
South-central Asia	-	60	40
South-eastern Asia	47	38	-

Source: United Nations Statistics Division, "World and regional trends", *Millennium Indicators Database*, available from <http://millenniumindicators.un.org> (accessed December 2003); based on data provided by United Nations Children's Fund, UNAIDS and World Health Organization.

Note: Figures for regions where less than 50 per cent of the population is represented by the data are not shown.

^a Data refer to surveys carried out in various years within the period 1996-2001.

^b Percentage of women aged 15-24 reporting the use of a condom during sexual intercourse with a non-regular partner in the past 12 months.

Studies in sub-Saharan Africa have found that only half of the young women (15-24 years old) respondents know that a healthy-looking person can be infected with HIV/AIDS. Surveys from south-eastern Asia show similar low levels of knowledge. Young women in Latin America and the Caribbean are better informed than in the other regions surveyed 77 per cent know that a healthy-looking person can transmit the AIDS virus.

Consistent use of condoms is one of the effective HIV prevention methods. The percentage of women who know that they can protect themselves by using condoms is an indication of the extent to which national information and education programmes have succeeded in promoting the knowledge of HIV/AIDS prevention methods. In the sub-Saharan African countries surveyed, on average, only about 50 per cent of young women know that they can avoid transmission of HIV by using a condom. In south-eastern Asia only about 38 per cent of women know that a condom can be used for prevention. South-central Asia has higher levels of prevention awareness with 60 per cent of young women reporting that using a condom can prevent HIV transmission.

Consistent correct use of condoms with non-regular sexual partners substantially reduces the risk of sexual HIV transmission.

Chart 8. Countries where less than 50 per cent of women aged 15-24 have a correct knowledge of HIV/AIDS

Percentage of women who know that a person can protect herself from HIV by consistent condom use, 1996/2001

Somalia	2
Tajikistan	5
Azerbaijan	11
Sudan	12
Mauritania	17
Central African Republic	20
Chad	21
Turkmenistan	21
Uzbekistan	22
Indonesia	23
Equatorial Guinea	26
Venezuela	28
Angola	30
Niger	30
Sierra Leone	30
Guinea-Bissau	32
Sao Tome and Principe	32
Madagascar	33
Peru	34
Ethiopia	37
Comoros	41
Albania	42
Cameroon	46
DR Congo	46
Haiti	46
Burundi	47
Senegal	49

Source: United Nations Statistics Division, *Millennium Indicators Database*, based on data provided by UNICEF, UNAIDS and WHO.

This is especially important for young people who often experience the highest rates of HIV acquisition because they have low prior exposure to infection and (typically) relatively high numbers of non-regular sexual partnerships.

Consistent condom use with non-regular sexual partners is important even in countries where HIV prevalence is low because it can prevent the spread of HIV in circumstances where non-regular relationships are common. Condom use is one measure of protection against HIV/AIDS; delaying age at first sex, reducing the number of non-regular sexual partners, and being faithful to one uninfected partner are equally important.

Only a limited number of countries have collected data on the percentage of women who used a condom the last time they had high-risk sex and not many countries have had successive surveys to show trends. A more comprehensive assessment is expected in the next 2 years. The behaviour data that do exist suggest that about 21 per cent of women in sub-Saharan Africa used a condom the last time they had sex with a high-risk partner (not their usual partner), in the last 12 months. Higher condom use rates were found in Latin America and the Caribbean (36 per cent) and in south-central Asia (40 per cent).

Chart 9. Percentage of women who know that a healthy-looking person can transmit HIV, 1996/2001

Tajikistan	8
Somalia	11
Sudan	18
Niger	22
Bangladesh	22
Madagascar	27
Chad	28
Mauritania	30
Azerbaijan	30
Guinea-Bissau	31
Indonesia	32
Sierra Leone	35
Ethiopia	39
Albania	40
Uzbekistan	41
Turkmenistan	42
Angola	43
Senegal	46
Lesotho	46
Equatorial Guinea	46

Source: United Nations Statistics Division, *Millennium Indicators Database*, based on data provided by UNICEF, UNAIDS and WHO.

Children orphaned by AIDS

About 14 million children under 15 had lost one or both parents to AIDS by the end of 2001 and the total number of children orphaned by the epidemic is forecast to almost double by 2010. In 2001, 12 per cent of sub-Saharan African children were orphans. This is almost double the percentage in Asia (7 per cent), and more than double the one in Latin America and the Caribbean (5 per cent). Much of this difference is attributable solely to HIV/AIDS. There are 19 countries in Africa with over 100,000 children orphaned by AIDS, including countries such as Nigeria, Democratic Republic of Congo, Ethiopia, where the number is close to 1 million.

Children and adolescents orphaned by AIDS face decreased access to adequate nutrition, basic health care, housing, and clothing. They are likely to drop out of school because of discrimination and emotional distress, because they cannot afford to pay school fees, or because they need to care for parents or caretakers infected with HIV, or for younger siblings. In sub-Saharan countries only 60 per cent of children aged 10-14 who lost both parents attend school, compared to 71 per cent of those with both parents still alive and living with at least one biological parent. In all 44 countries surveyed (of which 38 are in Africa) between 1996 and 2001, orphans are less likely to be attending school than children with both parents alive and living with at least one biological parent. In 10 of these countries,

Monitoring AIDS support programmes for AIDS orphans

Since AIDS orphans face discrimination and increased poverty, it is important to monitor to what extent AIDS support programmes are successful in providing educational opportunities to these children. The indicator used for this purpose is the ratio between school attendance of orphans to the school attendance of non-orphans.

school attendance of orphans is less than 75 per cent that of non-orphans. Moreover, in the limited number of countries with trend data, the gap between the two groups of children is widening. On average, in the African countries surveyed, school attendance of orphans is 85 per cent that of non-orphan children.

An agenda for change

At the United Nations General Assembly Special Session on HIV/AIDS in June 2001, heads of state and government committed themselves to meeting a number of key goals to diminish HIV prevalence among people aged 15-24. These include reducing the HIV prevalence among young people by 25 per cent in the most affected countries by 2005, and by 25 per cent worldwide by 2010, and ensuring that over 90 per cent of young people have the information, education, services and life skills to reduce their vulnerability to HIV. Additional goals address gender discrimination and the problems of young people who are especially vulnerable.

When serious and sustained efforts are made to ensure that young people have the means to protect themselves, HIV rates decline. Four examples of successful efforts are listed below.⁶

In Thailand, the government carried out a campaign promoting “100 per cent condom use” in brothels and embarked on an ambitious effort to change men’s attitudes towards women. Young men reduced their visits to sex workers by almost half between 1991 and 1995. Their condom use increased from 60 per cent to nearly 95 per cent. The net result was a drop in the percentage of young men infected with HIV from 8 per cent in 1992 to less than 3 per cent by 1997.

In Kampala, Uganda, HIV prevalence rates among pregnant girls aged 15-19 fell from 22 per cent in 1990 to 7 per cent in 2000, most likely because of delayed first intercourse, fewer partners and increased condom use. The President of Uganda has spoken openly about AIDS, and the mass media as well as the Government and community and religious organizations have active public education campaigns.

In Lusaka, Zambia, HIV prevalence among adolescents aged 15-19 declined from 28 per cent in 1993 to 15 per cent in 1998. There is also evidence of increased condom use and fewer sexual partners, attributed to a vigorous programme providing life skills education and health services for young people.

In Brazil, widespread information campaigns and prevention services have yielded positive results: in 1999 half the young men having sex for the first time used a condom, compared to fewer than 5 per cent in 1986, and condom sales rocketed from 70 million in 1993 to 320 million in 1999.

Prevention strategies are obviously crucial but poor and rich countries also need to work together to ensure that people infected with HIV/AIDS get access to the drugs they need. Such access represents a fundamental human right. More than three million people died from AIDS in 2002 and the vast majority of them were in developing countries, decimating communities and families. There are 5 to 6 million AIDS patients in poor countries that need antiretroviral drugs. Only 5 per cent, or 300,000, have access to them.⁷

The dissemination of patented AIDS drugs is governed by the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement. A recent decision of the Council for TRIPS⁸ clarifies the right of poor countries to import generic copies of key drugs in order to stave off a public emergency. This is crucial since many poor countries do not have a domestic pharmaceutical industry capable of developing such medicines. The existence of generic drugs is key in keeping drug prices affordable. Voluntary price cuts by drug companies cannot provide a comprehensive solution.⁹ Brazil’s HIV/AIDS treatment programme, for instance, relies on generic drugs. It has been able to cut the number of AIDS deaths by half and generate savings, which nearly offset the cost of providing the medicines.

Target 8 - Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

Malaria

Estimates of the number of acute malaria cases are highly variable and range up to 500 million. At a minimum, 1 million people die from malaria every year and malaria is likely to be a contributing factor in another 2 millions deaths. About 90 per cent of global malaria deaths occur in sub-Saharan Africa and 90 per cent of all malaria deaths in sub-Saharan Africa occur in young children.¹⁰ Malaria mortality among children 0-4 years in sub-Saharan Africa in the year 2002 was estimated at more than 900,000 deaths.¹¹

Indicators on malaria

Because young children suffer the largest burden, malaria mortality is tracked among children 0-4, as the number of deaths per 100,000 children. Progress made in prevention and treatment of malaria is also tracked among young children, on the basis of the percentage of children 0-4 who sleep under insecticide-treated bed nets and the percentage of those with fever who are treated with anti-malarial drugs.

Today, 40 per cent of the world's population—primarily those living in the world's poorest countries—are at risk of contracting malaria. In many parts of Africa, children experience at least three life-threatening infections by the age of one; those who survive may suffer learning impairments or brain damage.

Table 20. Malaria mortality rate, 2000^a

Region	Deaths per 100,000 children aged 0-4 years
<i>Developed regions</i>	0
Northern Africa	47
Sub-Saharan Africa	791
Latin America/Caribbean	1
Eastern Asia	0
South-central Asia	6
South-eastern Asia	2
Western Asia	26
Oceania	2

Source: United Nations Statistics Division, "World and regional trends", *Millennium Indicators Database*, <http://millenniumindicators.un.org> (accessed December 2003); based on data provided by World Health Organization.

^a Mortality estimates for malaria are under revision. Current estimates are not sufficiently reliable to estimate trends.

Pregnant women and their unborn children are also at particular risk of malaria, which is a cause of prenatal mortality, low birth weight and maternal anemia.

As with HIV/AIDS, malaria preys on the poor and makes their situation even more perilous. For instance, infection rates in rural areas are highest during the rainy season, which is also the time when families most need healthy adults to work in the fields.¹² Research suggests that families affected by malaria do, indeed, harvest less crops than non-infected families. This can be devastating to the incomes of the rural poor.

Lack of comprehensive data makes it difficult to assess whether the incidence of malaria is growing or reversing. Overall, estimates of levels are relatively unreliable—and insufficient to estimate trends—there is little evidence of improvement in the world's malaria-endemic regions.

Use of effective malaria prevention and treatment measures

The Roll Back Malaria initiative, established in late 1998 by the World Health Organization, UNICEF, and the World Bank, identifies four main interventions to reduce the burden of malaria in Africa:

- Use of insecticide-treated nets, which have been demonstrated to cut all-cause child mortality over the first two years by 20 per cent
- Prompt access to effective treatments in or near the home
- Providing anti-malarial drugs to symptom-free pregnant women in high transmission areas
- Improved forecasting, prevention and response, essential to respond quickly and effectively to malaria epidemics

Much of current monitoring on malaria control focuses on young children in Africa because they suffer the largest burden. Although there is sufficient evidence to confirm the effectiveness of the main malaria interventions—such as use of insecticide treated bed nets—these have not been made available to those people who need them most. Currently only about 15 per cent of children under five sleep under a net, and only 2 per cent sleep under an insecticide-treated net.

In the majority of African countries for which data are available, at least 50 per cent of children under five years with recent fever are treated with anti-malarial drugs. However, these figures do not take into account late treatment, inadequate dosing, poor quality drugs or resistance of the malaria parasite to the drugs. So the coverage rates for effective, life-saving treatment are likely to be significantly lower.

In Africa, the region where 90 per cent of the global burden of malaria is found, some important policies and initiatives have been launched: 13 have revised malaria treatment policies to recommend use of more effective anti-malarial drugs, and 18 have lowered or eliminated taxes and tariffs on netting materials and insecticide. In addition, 25 African countries and one multi-country group have been successful over the past year in securing support from the Global Fund to Fight AIDS, TB and Malaria.

Tuberculosis

TB kills 1.6 million people every year. In addition, almost half a million people infected with HIV also contract TB as a result. One in three people in the world—some 2 billion people—have latent TB infection but only around 10 per cent of them will go on to develop the disease. Each year there are about 8 million new TB cases and the poor are most at risk for a number of reasons: lack of treatment means the disease keeps spreading

in poor countries and malnutrition compromises people's ability to fight off the infection. Most of the deaths associated with TB occur during an adult's most productive years, between the ages of 15 and 54. Detecting and curing TB is, therefore, a key intervention for addressing poverty and inequality.

The worst-hit region is south-eastern Asia, with 3 million new cases of TB each year. Sub-Saharan Africa is also very badly hit. And in eastern Europe, TB deaths are increasing after almost 40 years of decline.¹³

Indicators on tuberculosis

Progress in the fight against tuberculosis is assessed on the basis of the prevalence rate in the total population, given by the number of cases of TB—patients in whom TB has been bacteriologically confirmed—per 100,000 people; and by the number of deaths due to tuberculosis per 100,000 population.

Table 21. Tuberculosis prevalence^a and death rates, 2001

Regions	Tuberculosis prevalence rate per 100,000 population	Tuberculosis mortality rate (deaths per 100,000 population)
<i>Developed countries</i>	23	5
<i>Developing countries</i>	144	31
Northern Africa	27	5
Sub-Saharan Africa	197	46
Latin America/Caribbean	41	9
Eastern Asia	108	21
South-central Asia	184	40
South-eastern Asia	218	47
Western Asia	40	9
Oceania	215	36
Transition countries in Europe and Asia	66	16

Source: United Nations Statistics Division, based on country data provided by the World Health Organization. See *Millennium Indicators Database*, "World and regional trends", <http://millenniumindicators.un.org>, (accessed December 2003).

^a Prevalence of sputum smear positive TB excluding TB attributable to HIV/AIDS, mortality due to all forms of TB; excluding TB attributable to HIV/AIDS.

Although worldwide data do not provide comprehensive information on trends, it would seem that TB is on the rise in many developing countries due to economic decline, HIV/AIDS, multi-drug resistant TB and the erosion of health systems.¹⁴

The recommended approach to TB control is via the internationally recommended TB control strategy DOTS, an inexpensive strategy that could prevent millions of TB cases and deaths over the coming decade. DOTS is a 5-pronged strategy for TB control consisting of:

- Government commitment to sustained TB control
- Detection of TB cases through sputum smear microscopy among symptomatic people
- Regular and uninterrupted supply of high-quality TB drugs
- 6-8 months of regularly supervised treatment (including direct observation of drug-taking for at least the first two months)
- Reporting systems to monitor treatment progress and programme performance

The success of DOTS depends on expanding case detection while ensuring high treatment success rates. Many of the 155 national DOTS programmes in existence by the end of 2001 have shown that they can achieve high treatment success rates, close to or exceeding the World Health Assembly target of 85 per cent. The global average treatment success rate for DOTS programmes was 82 per cent for the cohort of patients registered in 2000, though cure rates tend to be lower, and death rates higher, where drug resistance is frequent, or HIV prevalence is high.

By contrast, DOTS programmes are nowhere near reaching the target of 70 per cent case detection—that is the percentage of TB cases notified under DOTS. Only 33 per cent of estimated new smear-positive TB cases that arose in 2001 were notified under DOTS. The reasons for this are not clear. It may be because sick people do not attend health facilities or because of wrong diagnosis or because the data is inadequate.¹⁵

The increment in the number of cases detected under DOTS has been steady at about 137,000 additional smear-positive cases in each year since 1994.¹⁶ If this rate of progress is

maintained, the World Health Assembly endorsed target of 70 per cent case detection by 2005, will not be reached until 2013.

Notes

¹ UNAIDS/WHO, *AIDS epidemic update 2003* (UNAIDS/03.39E, Geneva, December 2003)

² UNAIDS statement at the fifth WTO ministerial conference, Cancun, 10-13 September 2003, available from <http://www.unaids.org/en/in+focus/topic+areas/economics+and+development.asp>

³ Global fund to fight AIDS, Tuberculosis and malaria, available from <http://www.globalfundatm.org/journalists/infosheets/malaria.html>

⁴ Ford Runge C., Senauer B., Pardey P. and Rosegrant M., "Ending hunger in our lifetime: Food security and globalization", Table 7.1, Published for the International Food Policy Research Institute, The Johns Hopkins University Press (Baltimore/London 2003)

⁵ UNAIDS/WHO, *AIDS epidemic update...*

⁶ UNICEF/UNAIDS/WHO, *Young people and HIV/AIDS: Opportunity in crisis*, p.23 (Geneva/New York, 2002)

⁷ UNAIDS statement at the fifth WTO ministerial conference...

⁸ 30 August Decision of the Council for TRIPS, "Implementation of paragraph 6 of the Doha Declaration on the TRIPS agreement and Public Health", available from http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm

⁹ UNDP, *Human Development Report 2003*, p.159 (Oxford University Press, New York, 2003)

¹⁰ WHO/UNICEF, *The Africa Malaria Report 2003*, p.17 (WHO/CDS/MAL/2003.1093, Geneva, 2003)

¹¹ Malaria mortality estimates are based on limited data and do not account for co-morbidity of various types. Work is under way to address these issues and the estimates will be revised retrospectively once the epidemiological review is completed and the procedures to account for co-morbidity have been developed and agreed upon.

¹² Global fund to fight AIDS, Tuberculosis and malaria, available from <http://www.globalfundatm.org/journalists/infosheets/malaria.html>

¹³ Global fund to fight AIDS, Tuberculosis and malaria, available from <http://www.globalfundatm.org/journalists/infosheets/tb.html>; and The Stop TB partnership, "Basic Facts on TB: stop TB, fight poverty" (24 March 2002), available from <http://www.stoptb.org/>

¹⁴ See WHO, *WHO Report 2002: Global Tuberculosis Control* (WHO/TB/2002.295, Geneva, 2002)

¹⁵ Dye C., Watt C.J., Bleed D.M. and Williams B.G., "What is the Limit to case detection under the DOTS strategy for TB control", *Communicable diseases* (WHO, Geneva 2003)

¹⁶ Dye C., Watt C.J. and Bleed D. (2002), "Low access to a highly effective therapy: a challenge for international tuberculosis control", *Bulletin of the World Health Organization*, 2002; 80:437-444.

How the indicators are calculated

Indicators of knowledge and prevention of HIV/AIDS

The agreed indicator on knowledge of HIV/AIDS is defined as the "Percentage of population aged 15-24 who correctly identify the two major ways of preventing the sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), who reject the two most common local misconceptions about HIV transmission, and who know that a healthy-looking person can transmit HIV". However, since there are not sufficient data to calculate the indicator as defined, UNICEF, in collaboration with UNAIDS and WHO produced two proxy indicators that represent two components of the actual indicator. They are defined as follows:

“percentage of women and men 15-24 who know that a person can protect her/himself from HIV infection by consistent use of condom”; and “percentage of women and men 15-24 who know that a healthy-looking person can transmit HIV”. These two indicators are currently used to track progress in promoting the knowledge of valid HIV prevention methods and reducing misconceptions relating to the disease. For the current report, only data on women were available.

The first indicator is calculated as follows: the number of women (or men) aged 15-24 who, in response to prompting, correctly identify consistent use of condoms as means of protection against HIV infection, as a percentage of total number of women (or men) respondents aged 15-24. The second indicator is calculated as follows: the number of women (or men) aged 15-24 who, in response to prompting, correctly respond that a person who looks healthy may transmit HIV, as a percentage of total number of women (or men) respondents aged 15-24.

The indicator on prevention, is defined as the number of women respondents ages 15–24 who reported having had a non-regular (non-marital and non-cohabiting) sexual partner in the last 12 months and using a condom the last time they had sex with this partner, as a percentage of the number of women respondents ages 15–24 who reported having had a non-regular sexual partner in the last 12 months.

Indicators on AIDS orphans

The number of children orphaned by HIV/AIDS is defined as the estimated number of children who have lost either their mother, their father, or both parents to AIDS before age. Since orphanhood is often accompanied by stigma, prejudices and increased poverty, it is important to monitor the extent to which AIDS support programmes succeed in securing the educational opportunities of orphaned children. The indicator used for this purpose is the ratio of the current school attendance rate of children aged 10–14 both of whose biological parents have died, to the current school attendance rate of children aged 10–14 whose parents are both still alive and who currently live with at least one biological parent. Although the indicator does not differentiate between children who lost their parents due to HIV/AIDS and those whose parents died of other causes, it does capture the extent to which AIDS support programmes succeed in securing the educational opportunities of orphaned children.

Indicators on tuberculosis

Tuberculosis prevalence and death rates

Prevalent cases of tuberculosis per 100,000 population (excluding tuberculosis attributable to HIV/AIDS) and deaths due to tuberculosis per 100,000 population (excluding tuberculosis attributable to HIV/AIDS).

Direct measures of TB prevalence are infrequent and recent population-based surveys have been confined largely to countries in the East Asia and Pacific regions. Direct measures of the TB death rate come from vital registration, but reliable figures on TB deaths are restricted mainly to OECD countries. Elsewhere, vital registration systems tend to underestimate TB deaths, but time series from some countries in Asia and the Americas give a useful indication of trends. Many developing countries have no vital registration system at all. In the absence of direct measures of prevalence and death rates, the values of these indicators can be obtained using a variety of estimation techniques.

Disease prevalence and deaths are more sensitive markers of the changing burden (years of life lost) of TB than incidence (new cases), although data on trends in incidence are far more comprehensive, and currently give the best overview of the impact of global TB control.^{ai}

TB prevalence estimates are for sputum smear positive TB, excluding TB attributable to HIV/AIDS. TB mortality estimates are for all forms of TB, excluding TB attributable to HIV/AIDS.

Proportion of tuberculosis cases detected, and proportion cured under DOTS

Treatment success rates (that is, percentage cured plus percentage completed treatment) can be monitored directly and accurately in cohorts of patients treated under the World Health Organization DOTS strategy. Case detection rates are estimated from the ratio of smear-positive case notifications in a given year divided by the estimated number of new smear-positive cases arising in that year. For many high-burden countries, there is a margin of uncertainty in the estimation of the denominator of this ratio.

^{a/} See also C. Dye, S. Scheele, P. Dolin, V. Pathania and M. C. Raviglione (1999), "Global burden of tuberculosis: estimated incidence, prevalence and mortality by country", *Journal of the American Medical Association* 282, p.677-686; C. Dye (2000), "Tuberculosis 2000-2010: control, but not elimination", *International Journal of Tuberculosis and Lung Disease* 4, suppl. 2, S146-S152; and E.L. Corbett, C. Watt, N. Walker, D. Maher, M.C. Raviglione, B.G. Williams and C. Dye, "The growing burden of tuberculosis: global trends and interactions with the HIV epidemic" (in preparation).

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* Capital letters A, C, E, F, R, S in parentheses indicate publications available in files at <http://unstats.un.org> under "Publications" in the languages shown, referring to Arabic, Chinese, English, French, Russian and Spanish.