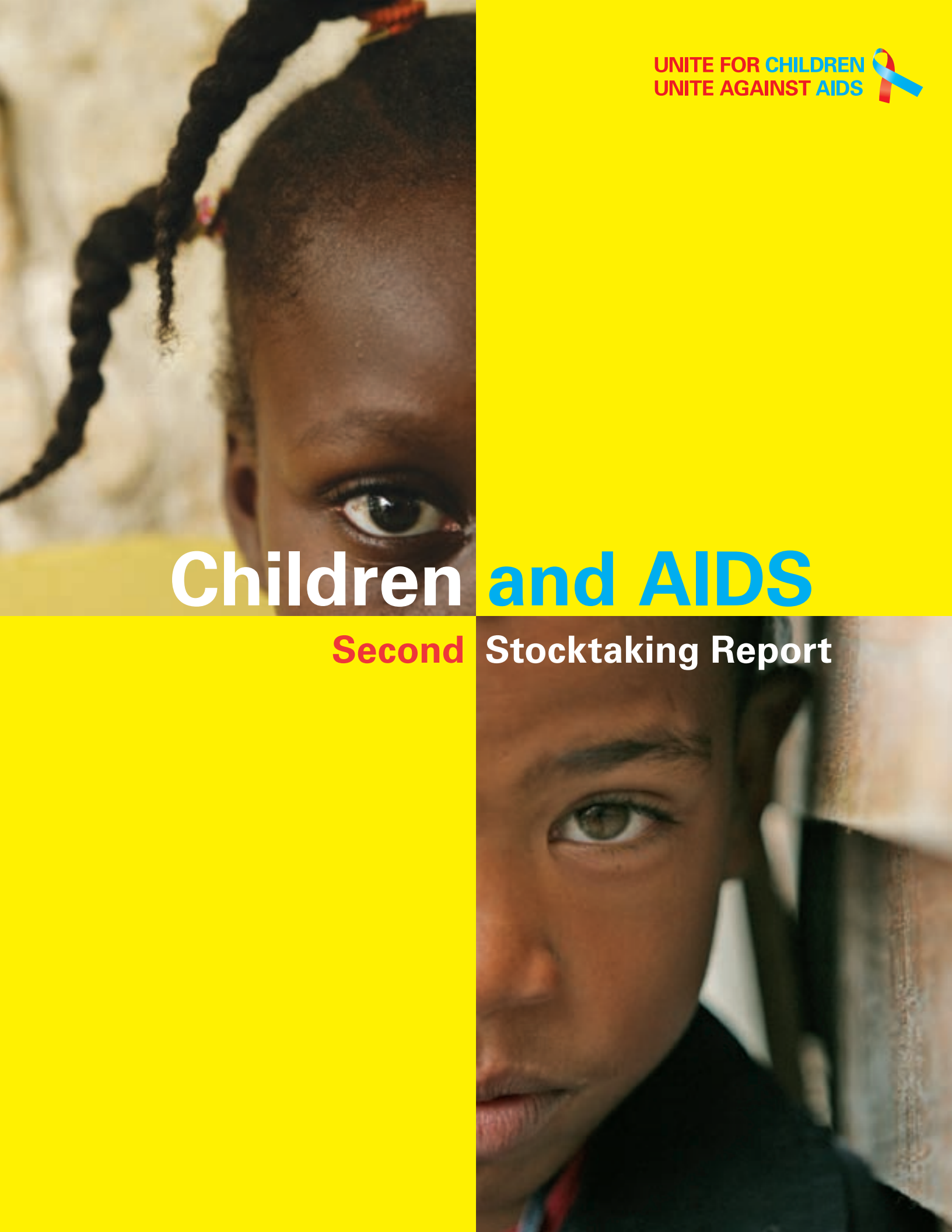


UNITE FOR CHILDREN  
UNITE AGAINST AIDS 

# Children **and AIDS**

**Second** Stocktaking Report



# Children and AIDS: Second stocktaking report

## Actions and progress

The quotations used throughout this report represent the views of the individuals quoted and not necessarily the views of UNICEF, UNAIDS or WHO.

UNAIDS, the Joint United Nations Programme on HIV/AIDS, brings together the efforts and resources of ten UN system organizations to the global AIDS response. Cosponsors include UNHCR, UNICEF, WFP, UNDP, UNFPA, UNODC, ILO, UNESCO, WHO and the World Bank. Based in Geneva, the UNAIDS secretariat works on the ground in more than 75 countries worldwide.



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## INTRODUCTION

For millions of children, HIV and AIDS have starkly altered the experience of growing up. In 2007, it was estimated that 2.1 million children under age 15 were living with HIV. As of 2005, more than 15 million children under 18 have lost one or both parents to AIDS. Millions more have experienced deepening poverty, school dropout and discrimination as a result of the epidemic.

In 2005, the United Nations Children's Fund (UNICEF), as part of its work as a cosponsoring agency of the Joint United Nations Programme on HIV/AIDS (UNAIDS), addressed a Call to Action to all those working to protect children from the consequences of the epidemic. It urged the international community to *Unite for Children, Unite against AIDS* to ensure that the next generation of children is AIDS-free. The initiative was based on stakeholders' commitment to reaching the Millennium Development Goals and living up to the promises made by world leaders at the United Nations General Assembly Special Session on HIV/AIDS in 2001.

The Call to Action set forth goals for 2010 in four programme areas, known as the 'Four Ps', derived from the child-related articles of the Declaration of Commitment on HIV/AIDS adopted at the 2001 Special Session (see box, below). These areas are a focus of efforts by all those working to ensure that the well-being of children remains at the heart of the global response to AIDS.

### **The 'Four Ps': Goals of the *Unite for Children, Unite against AIDS* initiative**

- **Prevent mother-to-children transmission of HIV**  
By 2010, offer appropriate services to 80 per cent of women in need.
- **Provide paediatric treatment**  
Provide antiretroviral treatment, cotrimoxazole or both to 80 per cent of children in need.
- **Prevent infection among adolescents and young people**  
Reduce the percentage of young people living with HIV by 25 per cent globally.
- **Protect and support children affected by HIV and AIDS**  
Provide services that reach 80 per cent of children most in need.

This second stocktaking report since the Call to Action finds important gains in the areas of the 'Four Ps', including:

- Improvements in the prevention of mother-to-child transmission (PMTCT) of HIV and in paediatric treatment:
  - In 2006, 351,034 HIV-positive pregnant women living in low- and middle-income countries received antiretroviral prophylaxis to reduce the risk of mother-to-child transmission of HIV, a 60 per cent increase from 220,085 in 2005.
  - In 2006, 127,300 HIV-positive children benefited from AIDS treatment programmes, an increase of 70 per cent from 75,000 in 2005.
- Recent evidence that HIV prevalence among pregnant women aged 15–24 attending antenatal clinics has declined since 2000–2001 in 11 of 15 countries with sufficient data. These include 8 countries in Eastern and Southern Africa, the region with the highest HIV prevalence levels among adults and young people.
- Widespread efforts to extend protection, care and support to children affected by AIDS in many countries, a closing gap in school enrolment rates between children who have lost both parents and other children, and a growing number of vulnerable children with access to education and social protection.
- In all areas, an improved capacity to measure progress in aspects of the epidemic that affect children.

Yet, with millions of children and women not being reached, these results are in no way satisfactory. PMTCT and paediatric treatment numbers remain too low. Programmes to effect risk reduction and behaviour change among adolescents and young people most at risk are insufficient. Services provided by governments, non-governmental organizations (NGOs) and faith-based organizations are reporting significant gains in coverage, but they reach only a very low percentage of children and families in need, and most interventions for children affected by AIDS are still at a small scale. Rapid, sustainable scale-up of programmes that have proven



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effective is essential so that protection, care and support are provided to all vulnerable children.

In addition to reviewing advances over the past year or so in the 'Four P' areas, this report will focus on three major themes.

First, **strengthening communities and families** is crucial to every aspect of a child-centred approach to AIDS. Support by governments, NGOs and other actors should therefore be complementary to and supportive of these family and community efforts, through, for example, ensuring access to basic services.

Second, interventions to support children affected by HIV and AIDS are most effective when they form part of **strong health, education and social welfare systems**. Unfortunately, because maternal and child health programmes are weak in many countries, millions of children, HIV-positive and -negative alike, go without immunization, mosquito nets and other interventions that contribute to the overall goal of HIV-free child survival.

A final theme of this report is **the challenge of measurement**. Documenting advances and shortfalls strengthens commitment and guides progress. A number of countries have data available on the 'Four Ps', and targeted studies are being developed to assess the situation of the marginalized young people who are most at risk but often missed in routine surveys.

## KEY MESSAGES OF CHAPTER 1

1. Strong maternal, newborn and child health programmes are the foundation for delivery of quality PMTCT services.
2. PMTCT coverage is increasing rapidly as countries adopt policies more favourable to its promotion and as government and international commitment, including donor funding, increase.
3. The adoption of provider-initiated and rapid HIV testing and counselling in antenatal and delivery settings is increasing the number of women who know their HIV status and can benefit from PMTCT and other HIV prevention, treatment, care and support services.
4. The incidence of domestic violence is known to be a significant problem in voluntary testing programmes and needs to be monitored in the case of routine, 'opt-out' testing.
5. Recent research on infant feeding supports exclusive breastfeeding by HIV-infected women for the first six months of their infants' lives when replacement feeding is not affordable, feasible, safe and sustainable.



# CHAPTER 1

## PREVENTING MOTHER-TO-CHILD TRANSMISSION OF HIV

About 50 per cent of infants who get HIV from their mothers die before their second birthday.<sup>1</sup> But antiretroviral prophylaxis administered to a woman during pregnancy and delivery and to her infant shortly following birth have been shown to sharply reduce the likelihood of the mother passing HIV infection to her baby.

Many low- and middle-income countries are in the process of scaling up their national PMTCT programmes, in line with the target set by the 2001 United Nations General Assembly Special Session on HIV/AIDS of reaching at least 80 per cent of pregnant women in need with PMTCT services by 2010.

### PROGRESS AND ACHIEVEMENTS

Most countries are making substantial progress towards preventing mother-to-child transmission of HIV, particularly in sub-Saharan Africa. In low- and middle-income countries, the proportion of HIV-positive pregnant women receiving antiretroviral prophylaxis to reduce the risk of transmission increased from 10 per cent in 2004 to 23 per cent in 2006 (see *Figure 1, page 6*). Of note is the steady progress made in Eastern and Southern Africa, which is home to the majority of children who have been newly infected. In this region, the proportion of HIV-positive pregnant women receiving antiretroviral prophylaxis for PMTCT increased from 11 per cent in 2004 to 31 per cent in 2006.

By the end of 2006, 21 low- and middle-income countries were on track to meet the 80 per cent coverage target by 2010, up

### PMTCT, paediatric treatment and the new global estimates

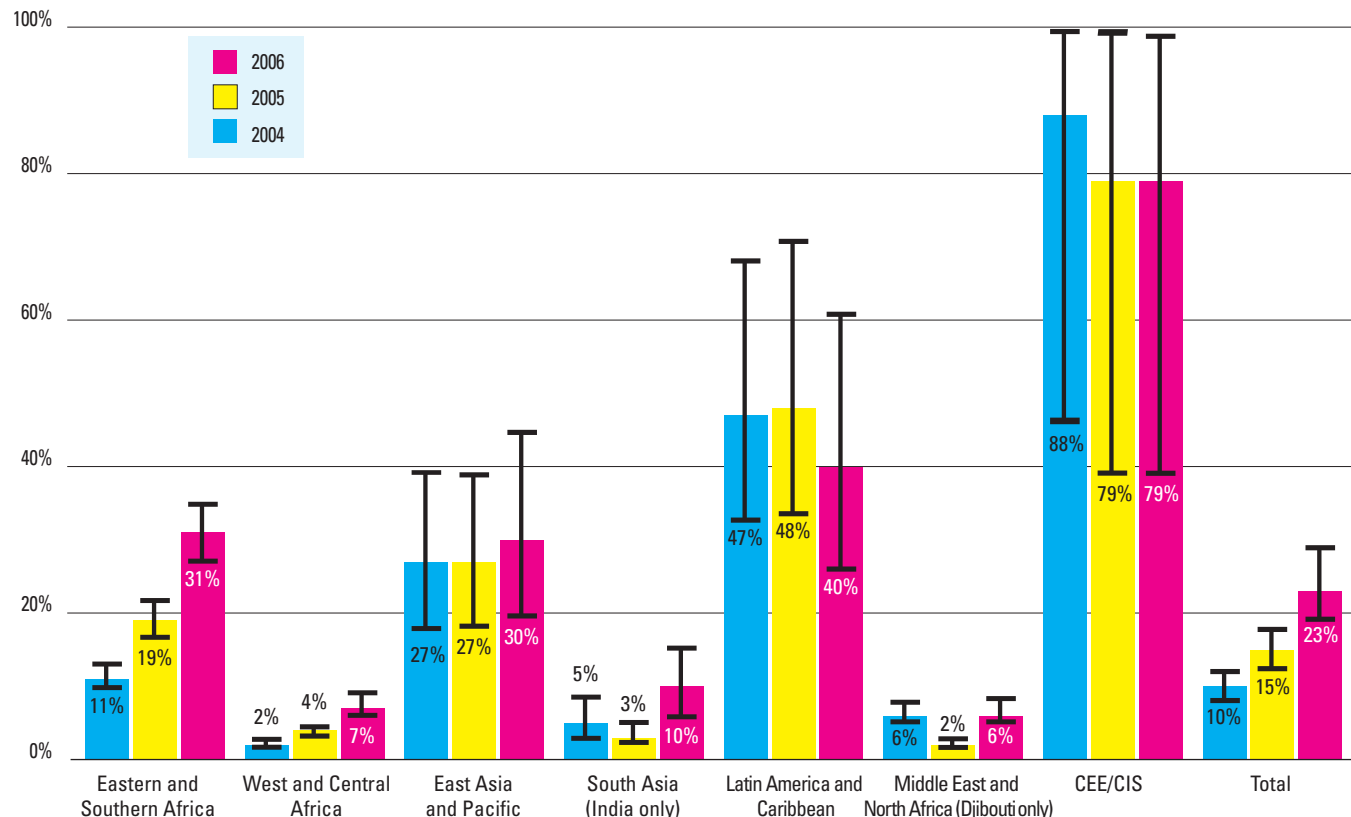
The availability of more reliable data in a number of countries led UNAIDS in 2007 to refine the methodology used in estimating the numbers of people living with HIV, new infections and AIDS deaths. UNAIDS and WHO in November 2007 released new global estimates, and on that basis UNAIDS has retrospectively generated new estimates for past years.

Similarly, global estimates of the number of women needing PMTCT services have been refined, and the coverage rates reported for 2004 and 2005 have thus been recalculated using the newly generated estimates.

PMTCT antiretroviral coverage is calculated by dividing the number of HIV-infected pregnant women who received antiretroviral prophylaxis for PMTCT by the estimated number of HIV-infected pregnant women. The difference in coverage from 7 per cent in 2004 reported in *Children and AIDS: A stocktaking report* (UNICEF, January 2007) to 10 per cent in 2004 in the current report is due to the change in the denominator of this fraction (i.e., the estimated number of HIV-infected pregnant women) according to the current UNAIDS estimates.

Estimates on the HIV care and treatment needs of children under 15 were not available at the time of publication of the current report. As a result, only the actual numbers of children reported to be receiving specific HIV-related interventions are presented in this report. (*For more details, see the Annex, page 38.*)

**FIGURE 1: Percent of HIV-infected pregnant women who received antiretrovirals for PMTCT (2004–2006)**



**Note:** Declines in coverage values in some regions may be due to an increase in the number of countries reporting data and the consequent increase in the denominator (estimates of HIV-infected pregnant women).  
**Source:** UNAIDS, UNICEF and WHO, 'Towards Universal Access: Scaling up HIV Treatment, Care and Prevention interventions in the health sector' (forthcoming); and UNAIDS/WHO unpublished estimates, 2007.

from only 11 countries in 2005 (see Table 1, page 8). Countries are defined as 'on track' if at least 40 per cent of all HIV-positive pregnant women received antiretroviral prophylaxis for PMTCT in 2005 and 48 per cent received it in 2006.

The progress described above is based on an analysis of national data on PMTCT coverage reported by low- and middle-income countries annually over the past three years and on estimates recalculated by UNAIDS of the numbers of pregnant women living with HIV in 2004–2006. In 2006, 108 countries had sufficient PMTCT coverage data to submit for analysis, almost twice as many as in 2004 (see Figure 13, page 27). These countries are home to 99 per cent of the estimated 1.5 million HIV-infected women in low-

and middle-income countries who gave birth in 2006.<sup>2</sup> (See Annex for methodology.)

## KEY ELEMENTS FOR PROGRESS

The progress observed in PMTCT implementation to date owes a great deal to support from a growing number of stakeholders, including the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the United States President's Emergency Plan for AIDS Relief (PEPFAR), and to the increasing political commitment of national governments and the private sector. Rwanda's rapid acceleration, for example, was spurred by the establishment of the annual 'National Paediatric Conference on Treatment, Care and Support to Children Infected and Affected by HIV and AIDS', for purposes of tracking progress and sharing scientific developments.

Despite the marked increase in access to PMTCT services during the past year, the world is far short of the 80 per cent coverage target. Poor geographical service reach, aggravated by weak health systems, and the fear, stigma and denial that



discourage many women from being tested for HIV are significant barriers to wider coverage. Community mobilization and family support, especially from men, for women who are HIV-positive remain urgent priorities, as does better integration of PMTCT services into stronger systems of maternal, newborn and child health care.

The global Interagency Task Team on the prevention of HIV infection in pregnant women, mothers and their children – led by UNICEF and the World Health Organization (WHO) – has conducted joint technical missions in 13 countries across sub-Saharan Africa and in India between 2005 and 2007. These missions review the status of programme implementation, identify bottlenecks and make recommendations on strategic programming in order to accelerate scaling up (*see box, below*).

### **Interagency Task Team recommendations to accelerate scale-up of PMTCT programmes**

- Continue evidence-based advocacy with high-level policymakers to galvanize political commitment and mobilize resources.
- Adopt provider-initiated testing and counselling.
- Develop systems for early diagnosis in infants and for referral and linkage to appropriate infant care and support.
- Strengthen systems for monitoring HIV-positive pregnant women for disease progression to ensure they have access to antiretroviral therapy when indicated.
- Engage communities to create demand for services.
- Improve monitoring and evaluation systems to facilitate better tracking of progress on key HIV-related interventions for women and children and to increase accountability.

WHO recently revised guidelines on antiretroviral drugs to treat HIV-infected pregnant women in line with current scientific evidence, recommending their use for women who need them and combination prophylactic regimens for women not yet requiring them. Many countries, including Botswana, Rwanda, Thailand and Zambia, now deliver more effective antiretroviral regimens to women – not only to prevent transmission to their infants but also to preserve their own health, thereby improving the well-being and survival of millions of children by safeguarding the lives of their mothers living with HIV.

## **MOVING FORWARD**

### **The role of maternal, newborn and child health-care services**

HIV has direct and indirect impacts on both maternal and child survival. To optimize outcomes and the impact of PMTCT services, it is therefore essential to integrate them with maternal, newborn and child health (MNCH) programmes.

Botswana, a country with a strong health-care system, has effectively integrated PMTCT and MNCH services, and its coverage of antiretroviral prophylaxis for PMTCT is now the highest in Africa. In 2006, Botswana reported that only 7 per cent of infants born to HIV-positive mothers became infected with HIV, compared to 35–40 per cent before the PMTCT programme began.<sup>3</sup> Similar results have been reported by national programmes in Thailand.<sup>4</sup>

Emerging evidence suggests that in some programmes, introducing PMTCT has helped improve access to and the quality of other MNCH services and has led to upgrading of infrastructure and an improvement in the skills of health workers, especially where these services were poor. PMTCT services can also improve overall health care for pregnant women. PMTCT research and service programmes implemented in Zambia, for example, led to improvements in rapid plasma reagin (antibody) screening for syphilis.<sup>5</sup>

In sub-Saharan Africa, fewer than half of deliveries take place with the assistance of a skilled birth attendant – a doctor, nurse or midwife. This situation greatly complicates the implementation of PMTCT services and the introduction of more efficacious PMTCT regimens. In Jamaica, nurses have successfully been trained to raise community awareness about PMTCT and encourage people to use PMTCT services.

Governments, donors and agencies must set a common agenda for expanding PMTCT services within the context of improved maternal, newborn and child health-care services. At present, most policies and guidelines address PMTCT and MNCH separately, and sometimes PMTCT policies contradict MNCH policies. Donors have tended to support one or the

**TABLE 1: Countries on track in 2005 and 2006 towards the target of 80 per cent ARV coverage for PMTCT by 2010**

Countries with 40 per cent ARV coverage in 2005	Countries with 48 per cent ARV coverage in 2006
Argentina*	Argentina*
Botswana	Barbados*
Brazil*	Belarus*
Ecuador*	Benin
Georgia*	Bhutan*
Jamaica*	Botswana
Moldova*	Brazil*
Namibia	Burkina Faso
Russian Federation*	Cuba*
Thailand*	Fiji*
Ukraine*	Georgia*
	Jamaica*
	Kenya
	Moldova*
	Namibia
	Russian Federation*
	Rwanda
	South Africa
	Swaziland
	Thailand*
	Ukraine*
<b>Number of countries on track in 2005: 11</b>	<b>Number of countries on track in 2006: 21</b>

**Note:** An asterisk (\*) indicates countries with low prevalence or concentrated HIV epidemics. For these countries, uncertainty bounds around estimates of the number of HIV-positive pregnant women are considered to be very wide, and estimated coverage is likely to be unreliable.

**Source:** UNICEF global database, 2004–2006.



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other, but not both.<sup>6</sup> Even as funding for PMTCT has soared, funds for MNCH programmes and family planning services have fallen in some countries, making expansion of PMTCT services more difficult.

## Community support

Many HIV-positive pregnant women do not seek PMTCT services for fear they will be discriminated against and for lack of involvement by their male partners in such services. Studies conducted in Nigeria, Uganda and the United Republic of Tanzania confirmed women's fears of stigmatization and rejection by their families as reasons for their refusal to be tested.<sup>7</sup> Outreach services designed specifically to reach such women are necessary, along with efforts to reduce discriminatory attitudes in the general population and improve gender relations.

Disclosure of HIV status to partners is strongly associated with willingness to undergo testing and adherence to other PMTCT interventions. In Cambodia, women attending a 'mother class' in which PMTCT counselling and testing were offered were four times more likely to accept testing if their partners also attended the class.<sup>8</sup>

Women Fighting AIDS in Kenya, an NGO, has launched the Male Plus PMTCT Champions project, recruiting 12 people living with HIV who were especially gifted at counselling and community mobilization for work in selected antenatal clinics and villages in the Mombasa and Kisumu districts. The 'Champions' have held discussion groups, counselling sessions for individuals and couples, and rallies and meetings to raise awareness about PMTCT, with remarkable results. Attendance at antenatal clinics has soared, and 98 per cent of programme attendees have agreed to be tested for their HIV status.<sup>9</sup>

The promotion of testing and disclosure must be balanced by the need to protect a woman's safety and her right to refuse treatment. Past studies have shown that a small but significant number of HIV-positive women who disclose their status to their partners experience domestic violence as a result, and a far larger number are afraid to disclose their status.<sup>10</sup> As testing services expand, including routine testing on an 'opt-out' basis wherein all women are tested unless they state that they do not want to participate, they should be accompanied by referral to legal services or village authorities who can deal with such cases.

### Infant and young child feeding

In industrialized countries, HIV-positive women are advised not to breastfeed their infants as a precaution against postnatal transmission of the virus. But in most low- and middle-income countries, not breastfeeding carries other important health risks to infants and young children, such as an increased risk of diarrhoea and pneumonia morbidity and mortality. Alternatives to breastfeeding are frequently unavailable, unaffordable and culturally unacceptable in populations where breastfeeding is the norm.

The impact of antiretroviral therapy on HIV transmission risk, during breastfeeding, is under evaluation, but interim results are encouraging. In addition, a study in Botswana where antiretroviral prophylaxis was provided shows that the risk of HIV infection and death by 18 months of age was similar in children who were breastfed and children who were formula-fed from birth.<sup>11</sup>

A consensus statement on HIV and infant feeding was recently adopted by all relevant UN departments and agencies following a technical consultation in Geneva, October 2006.<sup>12</sup> The statement recognizes that the most appropriate infant feeding option for an HIV-infected mother depends on her individual circumstances, including her health status and the local situation. It recommends exclusive breastfeeding for HIV-infected women for the first six months of life

unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time. When replacement feeding meeting these criteria is possible, the statement recommends the avoidance of all breastfeeding by HIV-infected women (*see box*).

### Infant nutrition and HIV

The risk of HIV transmission through breastfeeding creates a tragic dilemma for HIV-positive women. Although exclusive formula feeding eliminates the risk of HIV transmission, it carries grave risks of diarrhoeal disease, respiratory illness, malnutrition and death where access to clean water is not assured. Formula feeding is more costly than breastfeeding, but even women who can afford formula may fear that if they do so, others will suspect they are HIV-positive and stigmatize them.<sup>13</sup>

According to a study carried out by researchers in South Africa, breastfeeding when done exclusively is associated with approximately a 4 per cent risk of acquiring infection at 6 months, in infants who were negative at 6 weeks of age. The researchers also noted that the mortality in the first 3 months of life more than doubled in children who were receiving replacement feeding compared to those who were exclusively breastfed.<sup>14</sup>

Whatever women decide to do, they must be supported in carrying out their decision safely. Mixed feeding during the first months of life, still the norm in many countries, is extremely dangerous because it increases the risk of the child acquiring HIV in addition to other life-threatening infections that cause diarrhoeal disease and pneumonia. Counselling and public education programmes that promote exclusive breastfeeding for the first six months of the infant's life and discourage mixed feeding must continue.

### Remaining programmatic challenges

Scaling up PMTCT comes with major programmatic challenges even in countries with a demonstrable commitment and good access to maternal and child services. These key challenges include limited human resources and infrastructure for scale-up; weak maternal and child health-care services, including weak coordination between PMTCT and MNCH; poor follow-up for women and children; and weak linkages with HIV care, support and treatment.

## KEY MESSAGES OF CHAPTER 2

1. Access to paediatric HIV treatment has improved as a result of dramatic price reductions in antiretroviral drugs, increased and continued advocacy, and greater involvement of partners in paediatric HIV care. The positive trend is likely to continue with the recent approval of a fixed-dose generic paediatric antiretroviral combination by the US Food and Drug Administration and WHO.
2. Integration of paediatric HIV care and treatment in adult antiretroviral treatment sites using family-centred approaches has helped increase children's access to HIV services and should be supported.
3. Strengthening maternal and child health programmes and linking them to HIV care and treatment programmes will improve the survival of all children, including those living with HIV.
4. There is still a need to scale up HIV testing for children and to provide operational guidance on consent, disclosure and psychosocial support.
5. Performance measurement and quality improvement systems are tools that can be used to increase the uptake of essential interventions and ensure delivery of a comprehensive package of care that addresses the full breadth of child survival priorities.



## CHAPTER 2

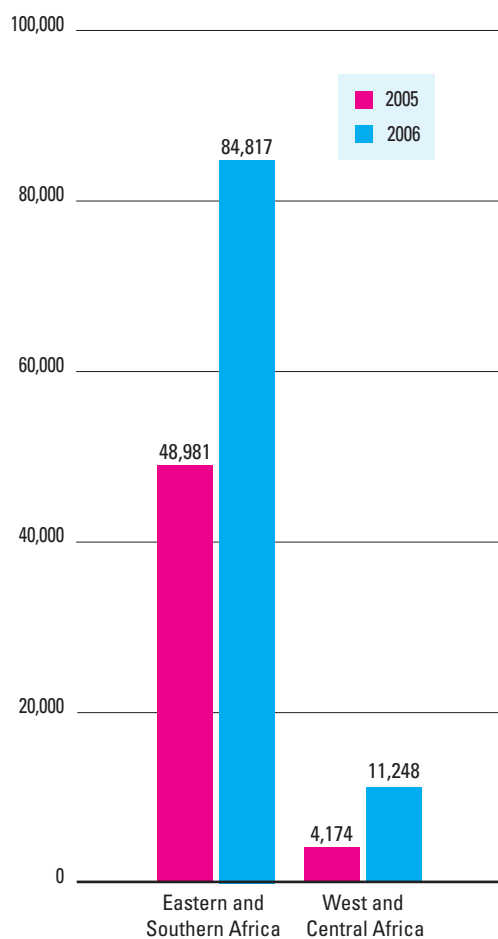
# PROVIDING PAEDIATRIC HIV CARE AND TREATMENT

Globally, children under 15 accounted for 2.1 million of the estimated 33.2 million people living with HIV in 2007.<sup>15</sup> Sub-Saharan Africa remains the most affected region and is home to nearly 90 per cent of all children living with HIV. Most of these children are infected with the virus while still in the womb, during birth or while breastfeeding, despite accelerated efforts to scale up interventions for preventing mother-to-child transmission of HIV. In 2007, some 420,000 children were newly infected and 290,000 died.<sup>16</sup>

## PROGRESS AND ACHIEVEMENTS

The majority of the children living with HIV can be saved by timely administration of paediatric antiretroviral treatment (ART) and cotrimoxazole, a low-cost antibiotic that has been shown to have a positive impact on HIV-infected children's survival. In all regions, more children were getting antiretroviral treatment in 2006 than they were in the year before (*see Figures 2 and 3, below.*)

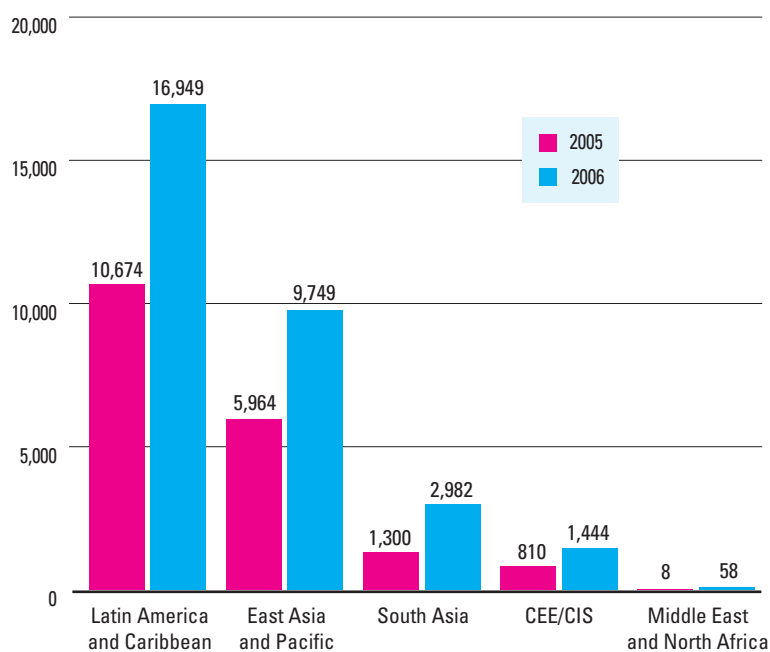
**FIGURE 2: Number of HIV-infected children under 15 receiving antiretroviral treatment, sub-Saharan Africa (2005–2006)**



Source: UNICEF global database, 2005–2006.

In low- and middle-income countries, 127,300 children received ART in 2006 compared with 75,000 in 2005, an increase of 70 per cent (*see Figure 4, page 12*). This assessment of progress is based on an analysis of national paediatric data collected from low- and middle-income countries over the past two years (*see Annex, page 38, for methodology*).

**FIGURE 3: Number of HIV-infected children under 15 receiving antiretroviral treatment, other regions (2005–2006)**



Source: UNICEF global database, 2005–2006.

## KEY ELEMENTS OF PROGRESS

Programming for paediatric HIV care and treatment has benefited significantly from the push for access to treatment for adults living with HIV. Most countries are expanding the capacity of providers for adults to enable them to provide children with care using family-centred and team-based approaches. In some high-prevalence countries, HIV testing in children is being expanded to all health care facilities for children, particularly where sick children are seen and those living with HIV are likely to be diagnosed.

Continued and increasing advocacy, reduced drug prices, use of fixed-dose generic antiretroviral combinations and better forecasting of paediatric drug needs have made it possible for many more countries to access antiretroviral therapy for children. PEPFAR, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Clinton Foundation and UNITAID, the international drug purchase facility, have made significant financial and technical contributions to scaling up paediatric HIV treatment, allowing ART to become accessible even in some rural areas.

Until recently, access to paediatric antiretroviral treatment was limited by a lack of antiretroviral drugs in formulations appropriate for use in children. People

caring for HIV-infected children often had to crush adult tablets and estimate the right doses. In August 2007, the US Food and Drug Administration and WHO's prequalification programme approved a new three-in-one generic antiretroviral drug combination for children. The drugs are now procured by governments through UNICEF's Supply Division and PEPFAR, but more efforts are needed to get affordable and better paediatric combinations pre-qualified and registered.

## MOVING FORWARD

### The importance of early treatment

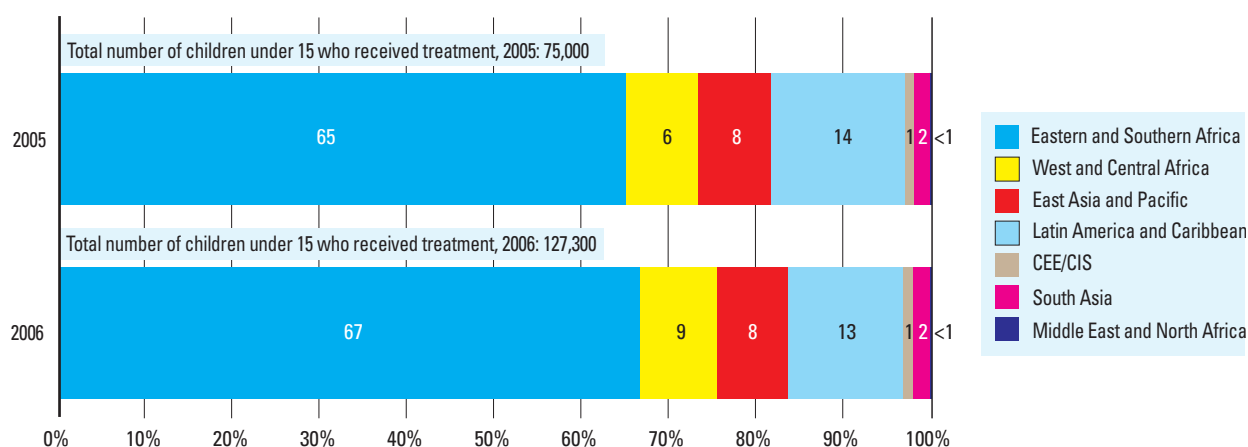
HIV infection progresses more aggressively in infants than in adults. The immune system in childhood is underdeveloped, and acquiring HIV infection early in a child's life thwarts its further development. Malnutrition, especially when aggravated by opportunistic infections in addition to diarrhoea, malabsorption and disorders of the digestive system, is associated with mortality among HIV-exposed and -infected children.

Early treatment within the first few months of life can dramatically improve the survival rates of children with HIV. A recent study in South Africa found that mortality was reduced by 75 per cent in HIV-infected infants who were treated before they reached 12 weeks of age.<sup>17</sup>

### HIV diagnosis

The inability of many health-care systems to track children's HIV status even when mothers are known to be infected with HIV results in many missed opportunities. Because treatment for children is often provided in a clinic other than the one in which the mother received antenatal care or delivered her infant, children exposed to HIV often go unrecognized when they visit immunization clinics and other care-delivery points.

**FIGURE 4: Regional distribution of HIV-infected children under 15 receiving antiretroviral treatment in low- and middle-income countries (regions as percentage of total) (2005–2006)**



Source: UNICEF global database, 2005–2006.



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Documenting the mother's HIV status on a child health card is one way of informing health workers of HIV infection so that the necessary care and support can be given. A number of countries, including Zambia and Zimbabwe, are adopting this approach, and some, such as the United Republic of Tanzania, have gone even further, providing the child health card to the mother when the baby is delivered. Ideally, the mother should receive the annotated child health card prior to leaving the hospital after delivery.

Access to early infant diagnosis using polymerase chain reaction (PCR) virological testing is starting to become more available, and in countries with limited laboratory capacity, specimens from distant sites are now being transported using filter paper to collect blood with dried blood spots (DBS). In Eastern and Southern Africa, where laboratory capacity and infrastructure are limited, the number of countries developing the necessary systems for DBS has increased from 6 in 2005 to 11 in 2006. DBS capacity was reported in 2 countries in West and Central Africa, 2 in East Asia and the Pacific and 2 in South Asia.<sup>18</sup>

Despite increasing capacity for early infant diagnosis, very few children are benefiting

from it. Experience with implementing the DBS approach indicates there are substantial delays between the time a specimen is collected and when the results are returned to the clinic. At sites where few children are tested for HIV, samples sometimes wait for up to a month before being sent to the laboratory. Similarly, once samples are tested, returning the results to the facility can be slowed by inefficient courier systems. This has the unfortunate consequence of results not being available at the clinic for up to several months, at which point many infants infected with HIV may already be dead. Internet and cellphone technology may help speed the return of results.

Scaling up PMTCT coverage, including follow-up testing of HIV-exposed infants, will eventually result in fewer infants becoming infected and prompt recognition of those who are infected and in need of treatment. However, given low PMTCT coverage rates in many countries with high HIV prevalence, testing only children born to mothers who are known to be HIV-positive will miss the majority of children living with HIV. In such circumstances, provider-initiated testing in malnutrition rehabilitation units or paediatric wards, including tuberculosis wards, will help optimize identification of infected children. WHO has called for increased provider-initiated testing and counselling in countries where PMTCT coverage rates are still low and HIV prevalence is high.

### Quality improvement in HIV care

A quality-management infrastructure can be instrumental in guiding planning decisions, monitoring care through measurement of health-care processes and outcomes, and informing and educating staff and the community. HIVQUAL,

## Building a national system through partnerships: Paediatric services in Cambodia

Cambodia's national system for paediatric HIV services provides HIV care and treatment to around 70 per cent of children in need. The system started in 2003 as a pilot project in Phnom Penh and by 2005 involved a broad range of providers and partners under the direction of the National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Diseases.

The National Centre coordinates a network of 150 HIV-testing facilities for children above the age of 18 months, and PCR testing for infants is available at a health facility in Phnom Penh. To date, 11 paediatric wards at referral hospitals have been renovated or constructed, basic equipment has been procured, and another six paediatric wards are under construction. Treatment is provided to children in need, with antiretroviral drugs and cotrimoxazole procured at prices negotiated by the Clinton Foundation HIV/AIDS Initiative. Data related to children's access to paediatric HIV care are collected and disaggregated by gender and age group, then analysed and regularly reported together with adult data.

Other partners in the system include CARE International, the European Union, Family Health International, the Global Fund, the Reproductive and Child Health Alliance, the UK Department for International Development, UNICEF, the US Government (through University Research Co. LLC), WHO and World Vision Cambodia.

a framework for quality management, is now being adapted for use in health systems around the world. It permits health workers to generate ongoing data about the performance of health facilities so that problems can be identified and remedied quickly and services constantly improved. HIVQUAL is especially appropriate for countries trying to scale up services and adhere to national standards of care.

Clinics or health ministries first identify performance measures such as the proportion of patients receiving CD4, or T-cell count, tests; the proportion of HIV-exposed children receiving HIV virological tests within the first six weeks after birth; or the proportion of children receiving recommended immunizations on schedule. Staff are encouraged to integrate basic quality-management activities into their routine work and to identify priority areas to be measured that are relevant to their system of care. Simple software then allows health workers to quickly generate data reports that can be used to improve services and sent to health ministries tracking aggregate data.

In collaboration with the US Centers for Disease Control and Prevention, the Government of Thailand piloted HIVQUAL in 12 hospitals in 2003, and it is now the standard method for monitoring the quality of HIV care throughout the health-care system, including paediatric treatment. HIVQUAL has also been implemented in Mozambique, Namibia and Nigeria and in Uganda, where it is being piloted for paediatric HIV care.

## The family-centred approach to HIV

A growing number of programmes are taking a family-centred approach to HIV, offering testing, treatment and other services to all members of a single household in one location. In Uganda, The AIDS Support Organisation (TASO) recognizes that the easiest and cheapest way to deliver care is to bring it to people's homes. With support from the US Centers for Disease Control and Prevention, TASO employs community health workers with motorbikes to deliver HIV treatment along with a range of other outpatient and preventive health services, including mosquito nets, clean-water tablets, tuberculosis treatment and the antibiotic cotrimoxazole as preventive treatment.

An often expressed concern is that the dramatic increase in AIDS funding could draw resources and expertise away from other programmes such as child survival and maternal health. On the contrary, the TASO programme and others like it show that the family-centred approach to HIV treatment can strengthen other services because it helps programme planners to recognize that paediatric HIV treatment is most effective in the context of strong child survival and maternal health programmes.



## South-South cooperation on HIV care and treatment

The Government of Brazil has developed a mechanism to assist and mentor other developing countries. Laços Sul-Sul, or South-South Ties, is a programme to promote universal access to first-line HIV treatment in seven countries with low HIV prevalence: Bolivia, Cape Verde, Guinea-Bissau, Nicaragua, Paraguay, Sao Tome and Principe, and Timor-Leste. UNICEF and UNAIDS support the programme.

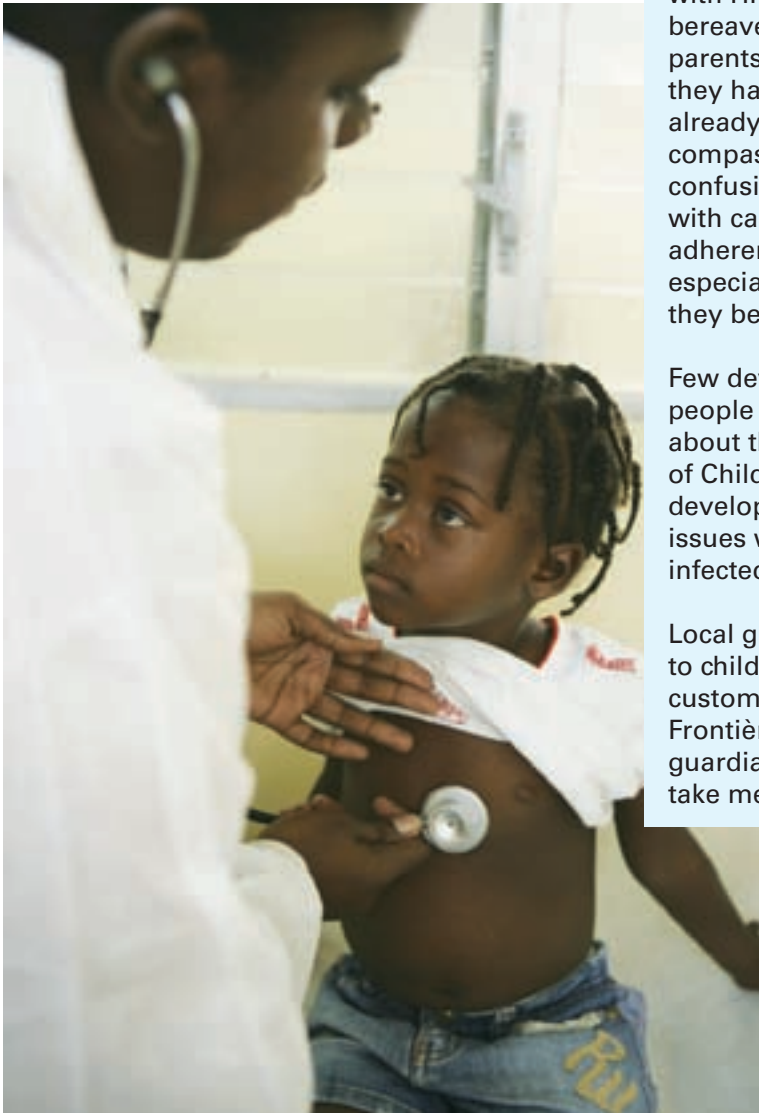
Brazil was one of the first developing countries to scale up HIV treatment and prevention services, and its domestic pharmaceutical industry produces antiretroviral drugs. Under Laços Sul-Sul, Brazilian health personnel provide medicine, technical assistance for capacity-building and monitoring, and support for the mobilization of civil-society groups around stigma reduction and HIV prevention and care.<sup>19</sup> All countries where the programme has been launched have seen a rapid scale-up of PMTCT and HIV treatment services for children as well as adults.

### Telling a child she or he has HIV

HIV does not just cause physical suffering. Children with HIV face loneliness, fear, depression and bereavement as well as the trauma of caring for sick parents. Many guardians fear that telling children they have HIV will add to the stress and anxiety they already feel. But if children are told with honesty and compassion, knowing their HIV status can reduce their confusion and anxiety, strengthen their relationships with caregivers, and help them understand why adherence to a treatment regimen is so important. It is especially vital for children to know their status before they begin to explore their own sexuality.

Few developing countries have guidelines to help people decide when and how to talk to children about their status. The African Network for the Care of Children Affected by HIV/AIDS, however, recently developed a curriculum that addresses disclosure issues within psychosocial care and counselling for HIV-infected children and adolescents.

Local guidelines can help people find ways to talk to children about AIDS in the context of prevailing customs and norms. In Thailand, Médecins Sans Frontières has developed fairy tales and dolls to help guardians explain to young children why they need to take medicine.<sup>20</sup>



## KEY MESSAGES OF CHAPTER 3

1. Better evidence-based information on the behaviours of adolescents and young people, especially those most at risk, is urgently needed in order to improve and target HIV prevention efforts. Survey data need to be disaggregated by age and sex, and by marital status when possible.
2. Comprehensive responses to preventing HIV in adolescents and young people need to be promoted, supported and monitored – with the meaningful participation of young people – as part of national HIV frameworks.
3. National and subnational priorities for HIV prevention should be established according to the different types of epidemics and different vulnerabilities and risks among adolescents and young people.
4. In high-prevalence settings with large populations of adolescents in school, the education sector needs to address HIV prevention – including the risks posed by complex sexual networks (multiple concurrent partnerships and intergenerational sex) – through formal curricula and other means.
5. Young people everywhere need accurate and relevant information about sexual and reproductive health and HIV transmission, as well as opportunities to build risk-reduction skills. They also need access to appropriate HIV prevention services, including voluntary counselling and testing, harm reduction, sexual and reproductive health services, PMTCT and male circumcision, and to commodities including condoms.



## CHAPTER 3

# PREVENTING INFECTION AMONG ADOLESCENTS AND YOUNG PEOPLE

The expansion of HIV treatment services cannot be sustained without greater emphasis on HIV prevention. Young people aged 15–24 accounted for about 40 per cent of new HIV infections among people (aged 15+) in 2007,<sup>21</sup> and 5.4 million young men and women are living with HIV (see Table 2).

**TABLE 2: Young people aged 15–24 living with HIV (2007)**

Region	Female	Male	Total
Sub-Saharan Africa	2,500,000	780,000	3,280,000
South Asia	270,000	440,000	710,000
Latin America and Caribbean	140,000	280,000	420,000
East Asia and Pacific	110,000	450,000	560,000
CEE/CIS	100,000	240,000	340,000
Middle East and North Africa	47,000	35,000	82,000
<b>Total</b>	<b>3,100,000</b>	<b>2,200,000</b>	<b>5,400,000</b>

Source: UNAIDS/WHO unpublished estimates, 2007.

## PROGRESS AND ACHIEVEMENTS

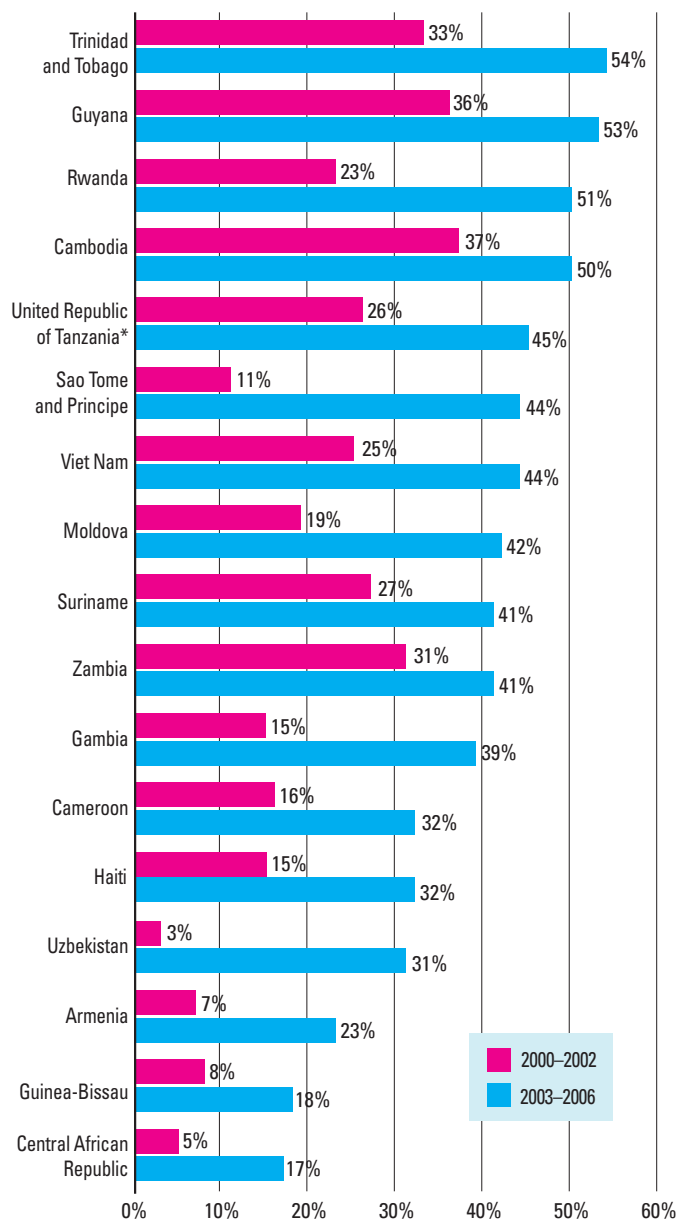
Some progress has been made in reaching MDG and UN General Assembly Special Session on HIV/AIDS targets on comprehensive correct knowledge of HIV (see Figures 5 and 6, page 18), and although data are scarce in many countries, the use of condoms during higher-risk sexual activity is reported to be increasing among young people in some countries (see Figures 7 and 8, page 19).

## KEY FACTORS FOR PROGRESS

The 2007 UNAIDS-WHO *AIDS Epidemic Update* indicates that HIV prevalence among young pregnant women aged 15–24 attending antenatal clinics has declined since 2000–2001 in 11 of 15 countries with sufficient data.<sup>22</sup> These include 8 countries in Eastern and Southern Africa, the region with the highest HIV prevalence levels among adults and young people. In some countries, the declines seem to be consistent with an increase in condom use by young people during sex with nonregular partners. There is evidence in some countries, further, of decreasing numbers of young men and women reporting having sex with more than one partner during the past 12 months (see Figures 9 and 10, page 20).

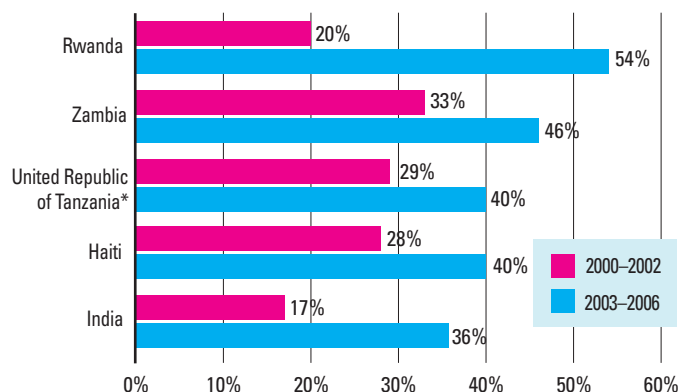
In some areas of Kenya, Uganda, the United Republic of Tanzania and Zimbabwe where adult HIV infection rates have decreased, there have been steep declines in multiple sexual partnerships in all age groups and broad changes in sexual and social norms, including improved relationships between sexual partners.<sup>23</sup> A study in 2004 found that condom promotion has been less successful in high-prevalence countries of sub-Saharan Africa, where most HIV transmission occurs during long-term relationships in which condoms are seldom used.<sup>24</sup> It is becoming increasingly clear that in

**FIGURE 5: Levels of comprehensive knowledge about HIV among young women aged 15–24 (2000–2006)**



**Note:** Comprehensive knowledge is defined as correctly identifying the two major ways of preventing sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), rejecting the two most common local misconceptions about HIV transmission and knowing that a healthy-looking person can transmit HIV. Countries listed are those in which knowledge levels have increased by at least 10 percentage points. Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
**Source:** UNICEF global database, 2000–2006.

**FIGURE 6: Levels of comprehensive knowledge about HIV among young men aged 15–24 (2000–2006)**



**Note:** Comprehensive knowledge is defined as correctly identifying the two major ways of preventing sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), rejecting the two most common local misconceptions about HIV transmission and knowing that a healthy-looking person can transmit HIV. Countries listed are those in which knowledge levels have increased by at least 10 percentage points. Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
**Source:** UNICEF global database, 2000–2006.

this region there is a need for more HIV prevention interventions that both decrease risk factors, such as multiple concurrent partnerships and lack of male circumcision, and increase protective factors linked to social, economic and cultural drivers of the epidemic.

## MOVING FORWARD

### HIV knowledge among young people

As part of a comprehensive HIV prevention response, adolescents and young people need accurate and relevant information about HIV transmission and an enabling and protective environment in their communities where they can talk openly about risk behaviours.

The United Nations Population Fund’s Y-PEER network, begun in 2001 to counter the spread of HIV, has expanded to 34 countries. More than 150,000 young people have been trained as peer educators and policy advocates for adolescent sexual and reproductive health, and they in turn have reached more than 12 million of their peers with age-appropriate and culturally relevant HIV prevention messages. Y-PEER is increasingly being called upon by governments to advise and advocate new policies and programmes for young people and involve them in national AIDS strategies.

Mass media can play an important role in getting HIV information to young people and have been shown to increase interpersonal dialogue about HIV and prevention behaviours. In Latin America and the Caribbean, MTV has been working

with UNICEF to produce *Sexpress Yourself*, a one-hour special in which young people talk openly and honestly about sex, sexuality, gender roles and HIV. In 2007, partners including the Global Youth Coalition on HIV/AIDS and TakingITGlobal joined with UNICEF to explore how social networking and wiki-based platforms could be used to educate, mobilize and involve young people in responding to the effects of HIV.

### Building skills to impact on risk and protective factors

A combination of interventions is required to prevent HIV transmission among adolescents and young people, including opportunities to build risk-reduction skills. More than 70 developing countries and territories now mandate life skills-based education with an HIV prevention component in national school curricula.<sup>25</sup>

Given a relatively high level of primary school participation in the Caribbean, with a slight disparity in favour of girls, school-based HIV prevention efforts have the potential to reach a large number of

adolescents. A common curriculum framework for health and family life education based on life skills from pre-primary to secondary school was recently revised by the Caribbean Community Standing Committee of Ministers of Education to include an increased focus on HIV prevention.

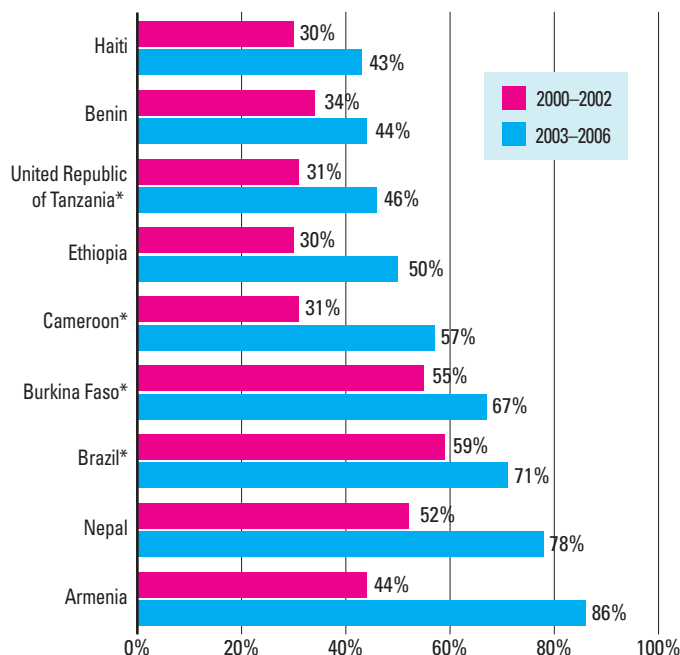
Almost all countries in West and Central Africa have some form of life skills-based education, including HIV and gender equality components, in the school curriculum. Life skills-based education is a mandatory part of formal curricula in over half the countries in the region. A number of countries also have education-sector plans for HIV and AIDS. This region has the lowest school participation rates at the primary level and the lowest rates after Eastern and Southern Africa at the secondary level,<sup>26</sup> so it is clear that efforts to reach adolescents and young people who are not attending school must be strengthened.

Life skills-based education is also being provided outside formal curricula. In Namibia, an extracurricular life skills-based intervention initiated in 1997 has trained more than 170,000 adolescents through a programme that is peer-led and focuses on sexual and reproductive health and HIV prevention. In Bangladesh, HIV and life skills-based education are part of the non-formal basic education for urban working children.

### Access to health and social services

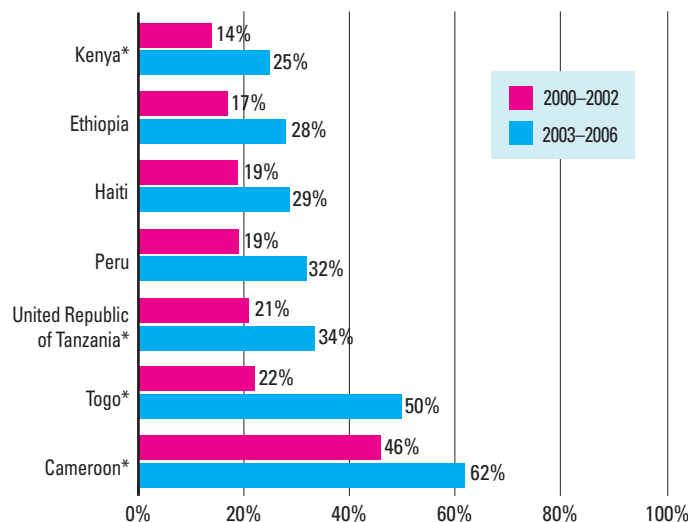
A comprehensive HIV prevention programme for young people includes private and confidential services to promote sexual and reproductive health, voluntary counselling and HIV

**FIGURE 7: Condom use at last higher-risk sex among young men aged 15–24 (2000–2006)**



**Note:** Higher-risk sex is defined as sex with a non-marital, non-cohabitating partner or sex with multiple partners. Condom use during higher-risk sex is a proxy for safer sexual practices. Countries listed are those in which levels of condom use have increased by at least 10 percentage points. Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
**Source:** UNICEF global database, 2000–2006.

**FIGURE 8: Condom use at last higher-risk sex among young women aged 15–24 (2000–2006)**



**Note:** Higher-risk sex is defined as sex with a non-marital, non-cohabitating partner or sex with multiple partners. Condom use during higher-risk sex is a proxy for safer sexual practices. Countries listed are those in which levels of condom use have increased by at least 10 percentage points. Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
**Source:** UNICEF global database, 2000–2006.

testing, treatment of sexually transmitted diseases, condom distribution, voluntary male circumcision, PMTCT services and harm reduction integrated into existing service-delivery points.

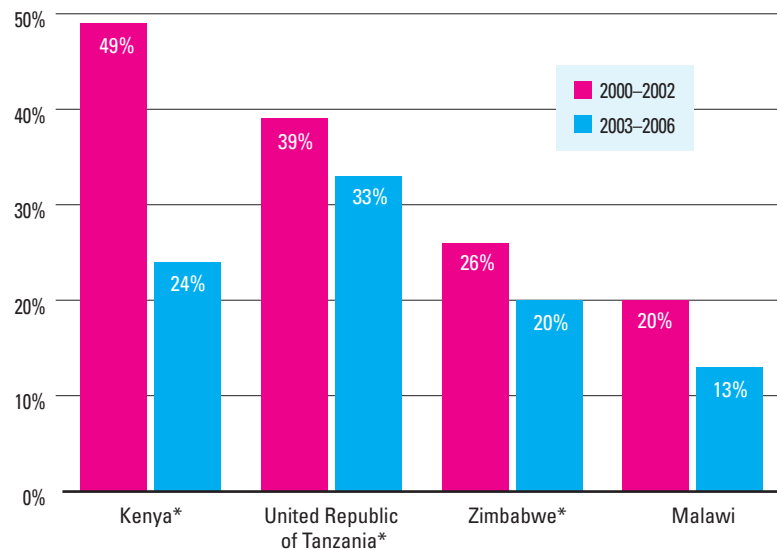
One example of an integrated programme is the youth-friendly health services provided within existing primary care clinics in Uzbekistan, where staff are trained to care for adolescents and will protect their confidentiality. The programme, a collaborative effort between UNICEF, Population Services International, local health authorities and Tarikat, a local Uzbek health programme, was the first in Uzbekistan to link outreach services with clinics in order to reach adolescents most at risk of HIV infection.<sup>27</sup>

Scaled-up interventions in Uganda during recent years include awareness-raising campaigns, condom programming, voluntary testing and counselling services, sexually transmitted disease treatment services, and HIV prevention and life skills-based education for adolescents and young people in and out of school – all of which are vital to a comprehensive approach.

Adolescents and young people are themselves a powerful resource for prevention. In Jamaica, the Bashy Bus (party bus) serves as a mobile clinic providing young people in rural communities with confidential, rapid HIV testing and counselling; youth facilitators and peer educators attract attention and disseminate HIV prevention messages through music and drama. The Living Positively ‘e-group’ supported by WHO and coordinated by members of the Global Youth Coalition on HIV/AIDS is a space on the Internet where young people living with HIV can find information and share ideas and experiences with each other and with service providers.

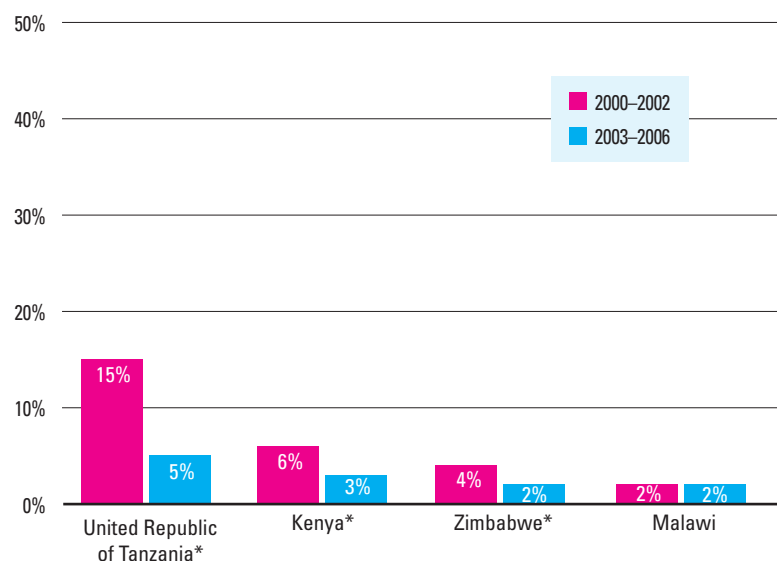
WHO has provided technical support to Ministries of Health in a number of countries in Africa – including Burkina Faso, Eritrea, Ghana, Kenya, Liberia, Malawi, Sao Tome and Principe, Togo and

**FIGURE 9: Percentage of young men aged 15–24 who have had sex with more than one partner in the past 12 months (2000–2006)**



Note: Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
Source: UNICEF global database, 2000–2006.

**FIGURE 10: Percentage of young women aged 15–24 who have had sex with more than one partner in the past 12 months (2000–2006)**



Note: Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.  
Source: UNICEF global database, 2000–2006.

the United Republic of Tanzania – for the development of a systematic approach to strengthening the health-sector response to HIV prevention and adolescent sexual and reproductive health, including developing standards for adolescent-friendly health services, adapting training materials for health workers and implementing systems for monitoring standards at district level.

In situations of armed conflict, natural disasters and other emergencies, access to health and social services, including post-exposure prophylaxis, is an essential part of a comprehensive strategy to address gender, violence and HIV prevention, particularly in medical responses to rape in emergency settings.

### **HIV prevention in low-prevalence and concentrated epidemics**

HIV prevention where prevalence is low or the epidemic is concentrated in specific populations is challenging because the spread of HIV is fuelled by high-risk and typically stigmatized behaviour. Much is known about how to prevent HIV infection among adolescents and young people most at risk, but programmes generally have not been taken to scale.

The Islamic Republic of Iran is an exception, and since 2000 it has had nationwide Counselling Centres for Behavioural Diseases to reduce the level of risk among injecting drug users. To complement these clinics, in 2005, the Ministry of Health opened adolescent-friendly service centres in seven cities, where young former drug users, young men having sex with men and especially vulnerable adolescents are trained as peer educators to talk to young people about HIV risks. An ongoing challenge in this programme, as elsewhere, is to ensure that young people most at risk make use of the available services.

Pakistan's National AIDS Control Programme and Ministry of Health have developed a specific HIV prevention strategy for young people that focuses on high-risk behaviour. The plan calls for different sectors to join prevention

activities run by the Ministry of Justice and Internal Affairs and the Ministry of Youth. The strategy identifies unemployment and poverty as important factors that increase vulnerability and calls for better vocational training and other educational opportunities for young people.

In Bulgaria and Serbia, the Power of Prevention project uses the UN Population Fund's Y-PEER network to bring HIV prevention information and services to young people involved in sex work. In India, focused peer outreach programmes, youth-friendly health services and communication activities in 43 high-prevalence districts are helping to reach adolescents, young people and especially girls at high risk.

### **Making a difference with adolescents and young people**

Behavioural change among adolescents and young people remains a critical weapon against HIV. In line with UNAIDS recommendations, national planners need to improve their understanding of the local HIV epidemic, review their response and ensure that it is informed by the best evidence of new infections and that coverage is broad and consistent. As they do so, they should identify and understand the risk behaviours and the societal and cultural contexts that increase young people's vulnerability to HIV infection, as well as structural and social drivers such as poverty and gender inequality.

Although understanding of the HIV prevention needs of adolescents and young people is greater than it was a decade ago, a pressing need remains for data to be collected on these groups, disaggregated by age and sex and, when possible, marital status. More qualitative research is urgently needed on the determinants of behavioural change among adolescents and young people, as well as of the social mobilization necessary to support such changes.

More needs to be done as well to ensure that adolescents and young people, including those living with HIV, systematically participate in the design, implementation and monitoring of HIV prevention programmes.

## KEY MESSAGES OF CHAPTER 4

1. Stigma and discrimination against children affected by AIDS continue to be major obstacles and must be addressed in all aspects of the response to the epidemic.
2. Laws, policies and services that support families and communities in looking after orphans will greatly improve the well-being of these children.
3. Support for children affected by AIDS should not exclude other equally vulnerable children from accessing essential services; programme beneficiaries should not be identified by orphan status alone.
4. Cash transfer and other social protection programmes enable poor families to provide better care for children affected by AIDS.
5. Extending basic health and quality education services to all children through the elimination of user fees and other means can help reduce disparities between orphans and other children.





## CHAPTER 4

# PROTECTING AND SUPPORTING CHILDREN AFFECTED BY AIDS

As of 2005, 133 million children around the world had lost one or both parents due to all causes, including AIDS,<sup>28</sup> and the number of orphans continues to increase. Sub-Saharan Africa is the region hardest hit by the epidemic (see Figure 11, below).

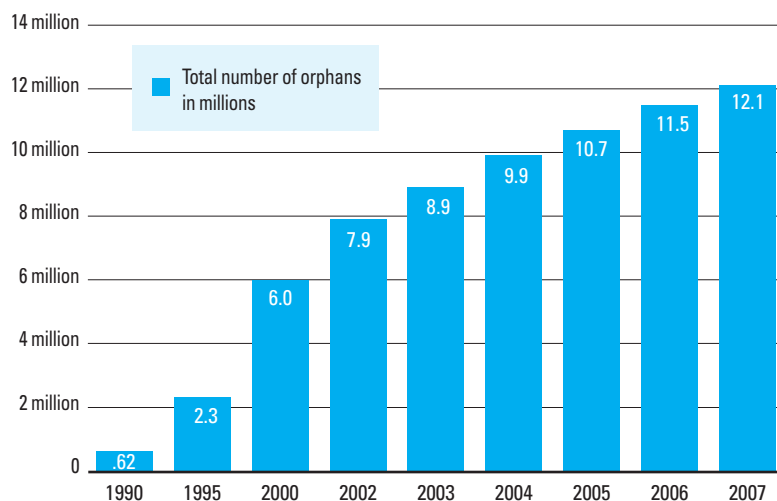
In areas of low prevalence and concentrated epidemic, only a small proportion of children are affected by AIDS. But they and their families are particularly likely to face discrimination, especially where parents are already stigmatized because of their perceived behaviour. Recent research in Bangladesh, India, Nepal and Pakistan shows how HIV-related stigma and discrimination prevent children from receiving basic social services and sometimes lead to long-term institutionalization and denial of parental care.<sup>29</sup>

Many women in communities where the prevailing view is that HIV-infected women cannot properly care for their families willingly accept state care for their children. This is especially likely where there is a strong tradition of government-provided care, as in former Soviet-bloc countries. It is estimated, for example, that between 10 per cent and 20 per cent of children born to HIV-infected mothers in the Russian Federation are abandoned at birth to state institutions, including hospitals.<sup>30</sup> But these facilities cannot provide the physical and emotional warmth or the intellectual stimulation needed for every child's healthy development.

## PROGRESS AND ACHIEVEMENTS

A key indicator of the situation of AIDS-affected children is the orphan school attendance ratio, which compares school attendance of children aged 10–14 years old who have lost both parents with those of children whose parents are both

**FIGURE 11: Estimated number of children under 18 orphaned by AIDS in sub-Saharan Africa (1990–2007)**



Source: UNAIDS/WHO unpublished estimates, 2007.

still alive and who live with one or both parents (see Figure 12). In most countries, children who have lost both parents are less likely to be in school than children whose parents are both still alive, but the disparity appears to be shrinking in many countries.

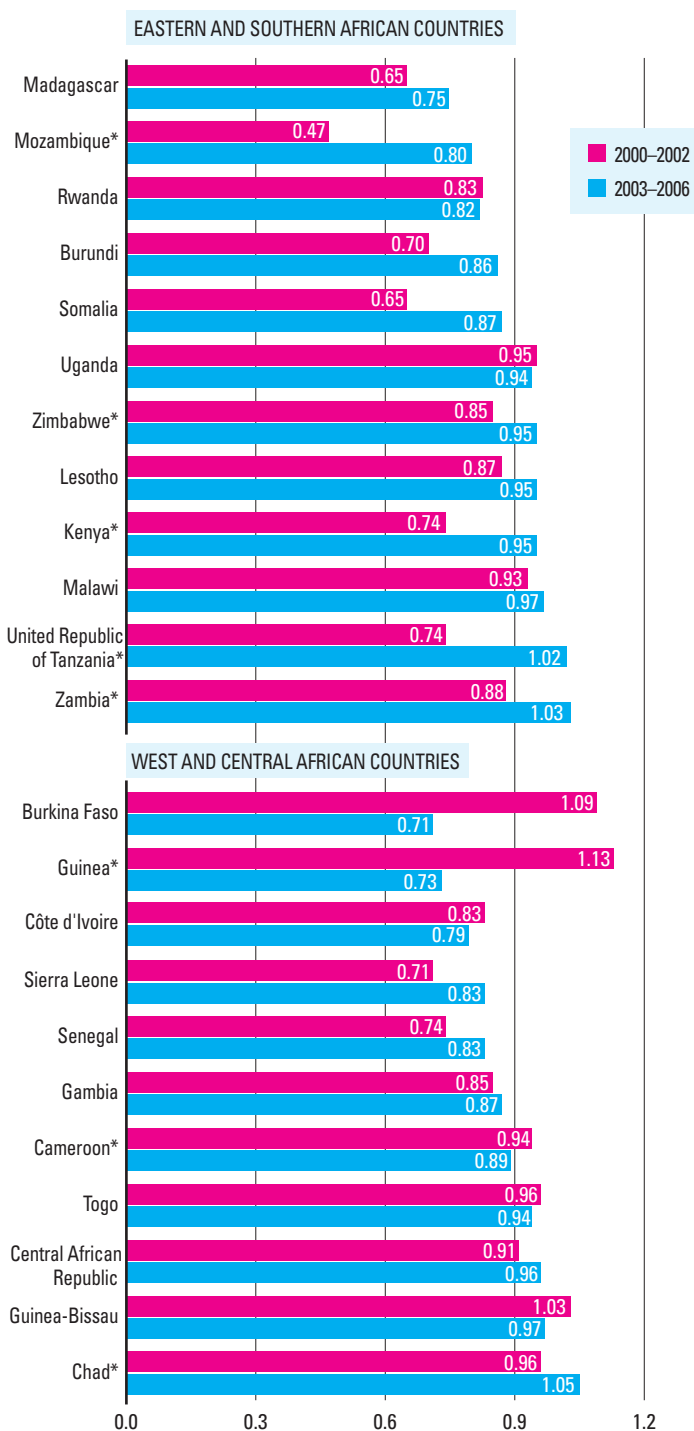
An increasing number of countries have developed specific national plans of action for orphans and vulnerable children. In 2007, 24 countries in the world, including 21 in sub-Saharan Africa, had completed such plans, and 10 countries in the world, including 9 countries in sub-Saharan Africa, had plans in process.<sup>31</sup> Many countries are integrating policies for children affected by AIDS into national development plans, overall national plans of action for children and the policy plans of ministries such as education and health.

The new South Asia Regional Strategic Framework for the Protection, Care and Support of Children Affected by HIV/AIDS provides guidance to the eight member countries of the South Asian Association for Regional Cooperation on protecting and supporting children affected by AIDS and calls for specific measures to address AIDS-related stigma. The framework positions children affected by AIDS within the broader group of children in difficult circumstances, and it promotes universal access to basic services without singling out the AIDS-affected children. As a follow-up, India has developed a national policy framework for children and AIDS that includes strategies, objectives and targets in the areas of prevention, PMTCT, paediatric treatment and protection for children affected by AIDS.

## KEY ELEMENTS FOR PROGRESS

Research on the effects of AIDS in Africa has led to a shift in thinking about what vulnerability in the context of a generalized epidemic means. Children affected by AIDS are more likely than other children to fall behind in school, and they tend to live in poorer households. Policymakers are

**FIGURE 12: Orphan school attendance ratio (2000–2006)**



Note: Asterisk (\*) indicates that data for the 2000–2002 bar are for earlier or different years than 2000–2002.

Source: UNICEF global database, 2000–2006.

finding that it often makes sense to support AIDS-affected communities by improving services for all vulnerable children – including those who are in poor health, out of school, burdened with excessive labour, extremely poor or stigmatized – regardless of their orphan or HIV status.

Often, AIDS-affected communities themselves will identify the protection and support needs in the community. Assistance for vulnerable children in communities has been carried out mainly by families, church-affiliated groups and other small organizations, including savings associations, cooperatives and women's support groups. Although their sustainability is not always assured, many small groups and organizations provide essential support and do excellent work.

Although governments and most large international agencies were initially slow to respond to the challenges children affected by AIDS face, this has been changing. But governments must do more to support equitable access for all AIDS-affected communities to such services as education, health care, birth registration, and legal services to address rape, child abuse and inheritance rights. Increasingly, governments and donors are exploring the possibilities for formal safety nets, such as cash transfer schemes for the poorest families (*see box, below*).

One way to address disparities created by AIDS is for governments to universalize education by such means as eliminating user fees, as well as to ensure protection, relevant learning opportunities and essential care and support within school settings. This approach is consistent with the broad goals articulated as MDGs and by the UN General Assembly Special Session on HIV/AIDS of addressing factors that make people vulnerable to infection while protecting their health and human rights.

### The role of cash transfers in mitigating the impact of AIDS on children

In 2007, UNICEF evaluated cash transfer schemes in Malawi, South Africa and Zambia. The programmes use a community-based, participatory approach to identify extremely poor, AIDS-affected households and provide them with a monthly stipend – about US\$7.50 to \$10 in Zambia – roughly double their total income. The researchers estimate that the schemes reached approximately 80 per cent of households in need.<sup>32</sup> Malawi's pilot scheme is now being scaled up with the aim of reaching about 25,000 households, home to about 74,000 orphans and vulnerable children, by the end of 2008.

In Zambia, the evaluation found that food consumption had increased, even though there was a drought shortly before the study was conducted, and the incidence of illness declined in both children and adults. School enrolment rates rose only slightly, however, probably because there are few schools in the area and drought, illness and other household calamities kept the most vulnerable children at home.

In 2004, the Kenyan Ministry of Home Affairs initiated a pilot cash transfer programme for orphans and vulnerable children. The pilot, which has reached 5,000 households and aims to reach 100,000 by 2012, targets areas with high poverty and HIV prevalence rates. An initial community survey is carried out to identify the poorest households, then a management information system checks the criteria and ranks the households. The ranked list is discussed in a community meeting to determine which households will be enrolled in the scheme. The national post office has been contracted to identify reliable providers of payment services.

Scaling up cash transfers to the poorest 10 per cent of households in countries seriously affected by AIDS can be affordable. The UNICEF study estimates that it would cost about \$42 million in Malawi,<sup>33</sup> and an International Labour Organization study in seven sub-Saharan African countries calculates that the cost would be less than 1 per cent of each country's gross domestic product.<sup>34</sup> Cash transfers are not a panacea, but they can make a difference, especially if they are part of a larger programme of social protection led by the government and civil society.

## Examples of community-based programmes for vulnerable children

Swaziland has 665 neighbourhood care points providing such basic services as food, social support and a safe place to play to 30,000 vulnerable children throughout the country. Such organizations serve as the eyes and ears of the community, identifying and referring children who are out of school, in poor health or victims of abuse.

A pilot programme in the Democratic Republic of the Congo assisted about 50,000 orphans and vulnerable children in 2006. It uses a pre-existing network of volunteers, mainly organized through the Catholic Church, to identify children to be integrated into primary schools and provided with health services – at no cost to their parents. Supported by UNICEF since 2004, the programme has supported families through income-generating activities for caregivers and vocational training for older children.

The François-Xavier Bagnoud Association has been running programmes to support vulnerable families in Uganda since 1990 and in Rwanda since 1995. Families are given comprehensive support for three years, including health care, antiretroviral treatment if necessary, school tuition, vocational training, financing for small businesses and psychosocial counselling. After completing the programme, some 80 per cent of families are able to support themselves. All children in beneficiary families are now in school.



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## MOVING FORWARD

### Meeting the psychosocial needs of children affected by AIDS

Psychosocial support is essential and best delivered by relatives and others who have a long-term, stable relationship with the child. In most cases this does not require external psychosocial interventions. Programmes should aim instead to strengthen families to care for orphaned and vulnerable children, re-establish domestic routines, and promote a sense of dignity and respect for children and caregivers. They must endeavour to create a supportive environment in which children feel secure enough to express their needs and talk about their feelings voluntarily in the context of an enduring support system.

Faith- and community-based organizations can support families and communities through training or community-based drop-in centres where vulnerable children can find food, other necessities and a safe place to play. The centres can also provide support in cases of abuse and neglect, and the assistance of adults who are willing to negotiate on a child's behalf with schools, social services and other institutions.

## CHAPTER 5

# MONITORING PROGRESS AND DATA AVAILABILITY

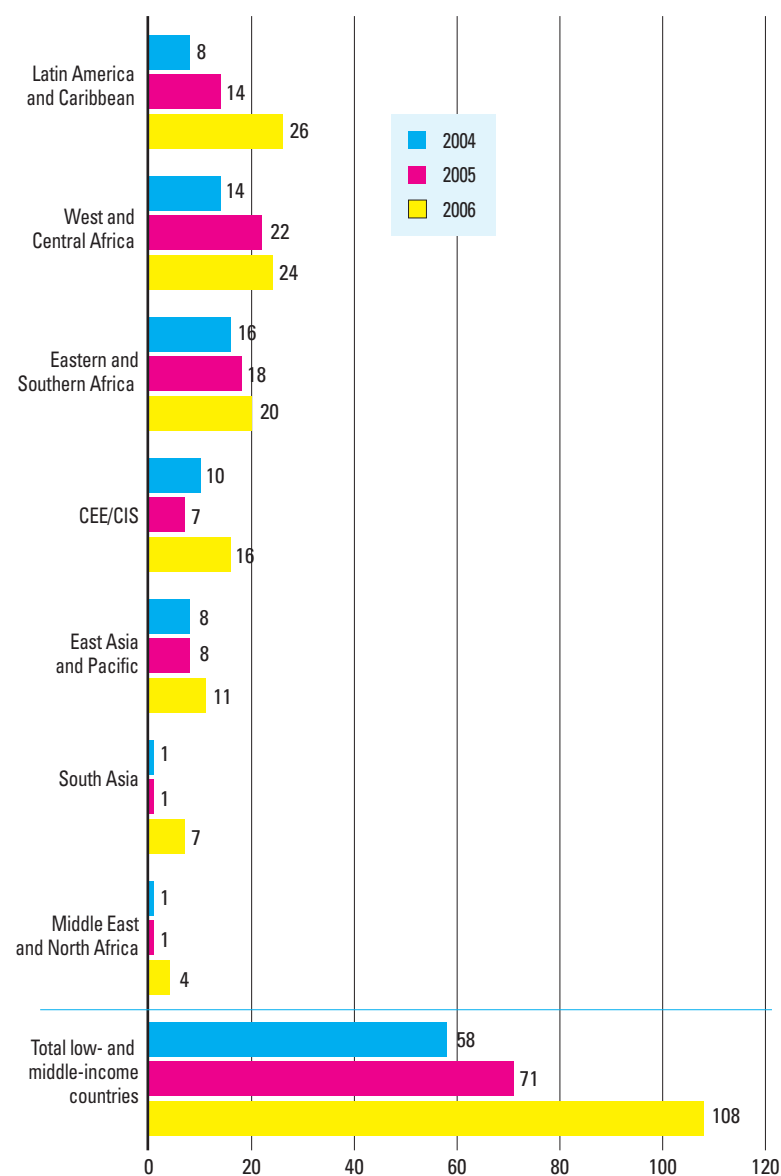
*“One of our biggest challenges in the AIDS response for children is the failure to access the key data on children necessary for designing effective programmes. We urgently need to know more about how AIDS affects different children at different stages of childhood so that we can respond better to their needs.”*

**– Michel Sidibe,  
UNAIDS  
Deputy Executive Director  
for Programmes,  
at the Second Pan-African  
Forum on Children,  
Cairo, 30 October 2007**

Unite for Children, *Unite against AIDS* is fundamentally about reducing HIV infection among children and young people and mitigating the impact of AIDS. To be sure that the activities supported are of high quality and based on the best available evidence, national monitoring systems are essential. As Figure 13, below, shows, the number of countries reporting data on prevention of mother-to-child transmission of HIV has increased dramatically from 2004 to 2006.

Nonetheless, the range and reliability of the data are still limited. Few countries systematically collect information on CD4 testing, cotrimoxazole prophylaxis or early infant diagnosis, so good global figures are not available. WHO,

**FIGURE 13: Number of countries reporting data on antiretrovirals for PMTCT (2004–2006)**



Source: UNICEF global database, 2004–2006.

UNICEF, UNAIDS and other partners are working together to strengthen national monitoring and evaluation capacity.

Data on preventing HIV among young people are increasingly available. These are collected mainly through Multiple

Indicator Cluster Surveys supported by UNICEF, Demographic and Health Surveys, and Behavioural Surveillance Surveys. However, data are still limited. Concerted efforts need to be made to support countries in data collection among marginalized and hard-to-reach populations. Table 3, below, shows the number of countries with data available on indicators of young people's HIV knowledge and sexual behaviour.

**TABLE 3: Number of low- and middle-income countries with data available on indicators of HIV knowledge and sexual behaviour among young people (2000–2006)**

Indicator: Percentage of young people aged 15–24 years with comprehensive correct knowledge of HIV/AIDS					
Region	Number of countries in region	Female		Male	
		Number of countries with:		Number of countries with:	
		at least one data point	at least two data points	at least one data point	at least two data points
Eastern and Southern Africa	21	19	10	13	5
West and Central Africa	24	20	13	13	1
Latin America and Caribbean	35	9	5	3	1
East Asia and Pacific	27	6	4	3	0
South Asia	8	3	1	2	1
Middle East and North Africa	20	7	1	1	0
CEE/CIS	21	17	6	5	1
Low- and middle-income countries	156	81	40	40	9
Indicator: Percentage of young people aged 15–24 who used a condom at last higher-risk sex					
Region	Number of countries in region	Female		Male	
		Number of countries with:		Number of countries with:	
		at least one data point	at least two data points	at least one data point	at least two data points
Eastern and Southern Africa	21	15	6	14	6
West and Central Africa	24	19	6	13	2
Latin America and Caribbean	35	10	3	5	1
East Asia and Pacific	27	1	0	3	0
South Asia	8	1	1	2	2
Middle East and North Africa	20	1	0	1	0
CEE/CIS	21	9	0	5	1
Low- and middle-income countries	156	56	16	43	12
Indicator: Percentage of young people aged 15–19 who had sex before age 15					
Region	Number of countries in region	Female		Male	
		Number of countries with:		Number of countries with:	
		at least one data point	at least two data points	at least one data point	at least two data points
Eastern and Southern Africa	21	14	6	12	6
West and Central Africa	24	20	4	15	1
Latin America and Caribbean	35	10	3	5	1
East Asia and Pacific	27	3	1	3	0
South Asia	8	2	1	2	1
Middle East and North Africa	20	0	0	0	0
CEE/CIS	21	11	1	2	1
Low- and middle-income countries	156	60	16	39	10

**Note:** The low- and middle-income countries included in the analysis are those with UNICEF presence only. Data refer to any data that were collected during 2000–2006.

**Source:** UNICEF global database, 2000–2006.

Because a definition of vulnerability has not been standardized and a minimum package of services has yet to be determined, developing routine monitoring indicators and tools for collecting data on orphans and vulnerable children is difficult. Poor coordination of services means there is a high chance that children will receive multiple services and be counted more than once. UNICEF can play a leading role in defining optimum services and beneficiaries, as well as in strengthening reporting on the impact of greater attention to vulnerable children. See Table 4, below, for the number of countries reporting on orphan school attendance.

**TABLE 4: Number of low- and middle-income countries with data available on orphan school attendance (2000–2006)**

Indicator: Orphan school attendance ratio			
Region	Number of countries in region	Number of countries with at least one data point	Number of countries with at least two data points
Eastern and Southern Africa	21	19	12
West and Central Africa	24	21	10
Latin America and Caribbean	35	11	3
East Asia and Pacific	27	5	1
South Asia	8	1	0
Middle East and North Africa	20	5	0
CEE/CIS	21	11	1
Low- and middle-income countries	156	73	27

**Note:** The low- and middle-income countries included in the analysis are those with UNICEF presence only. Data refer to any data that were collected during 2000–2006.

**Source:** UNICEF global database, 2000–2006.



## CHAPTER 6

# RESOURCE MOBILIZATION

In September 2000, the largest gathering of world leaders in history took place at the United Nations and adopted the Millennium Declaration, which soon gave rise to a series of development goals and targets for their achievement. Among them was Millennium Development Goal 6, to combat HIV and AIDS, malaria and other diseases, and the relevant target, to halt by 2015 and begin to reverse the spread of HIV and AIDS.

Since these landmark events, the global financial commitment to HIV prevention, treatment, care and support has grown impressively (see *Figure 14, page 31*), and issues related to children are gaining importance on the global agenda and in budgets pertaining to HIV and AIDS. The commitment of the Bill & Melinda Gates Foundation, the Global Fund to Fight AIDS, Tuberculosis and Malaria, PEPFAR and UNAIDS, among others, have made the goal of universal access realistic – thereby creating an unprecedented opportunity for global community action.

At the G-8 Summit in Gleneagles in July 2005, the ‘Group of Eight’ leading industrialized countries called on international organizations “to develop and implement a package for HIV prevention, treatment and care, with the aim of moving as close as possible to universal access to treatment for all those who need it by 2010.” This goal was endorsed by the UN General Assembly at the World Summit in September 2005, and the charge of providing universal access has been embraced at local and national levels. Many communities have become prime examples of how civil society and national governments can work together to reach universal access through scaling up of programmes and interventions.

Today, programmes in the ‘Four P’ areas – PMTCT, paediatric care and treatment, prevention among adolescents and young people, and protection and support for children affected by AIDS – benefit from the combined financial support of each country’s dedicated public spending and overseas development assistance.

UNAIDS calculates that US\$9 billion in 2006 and \$10 billion in 2007 were available to combat AIDS.<sup>35</sup> Bilateral and multilateral flows accounted for \$6.2 billion, or 70 per cent, of this total. Funding from domestic sources in low- and middle-income countries reached \$2.8 billion in 2006, accounting for approximately 30 per cent of the total spending on HIV and AIDS. Domestic funding has increased every year since 2005.

Spending patterns differ considerably from country to country, depending on service coverage and availability of funding. All but a few countries of sub-Saharan Africa are low-income and heavily dependent on external funding for their AIDS response.



Since its creation in 2002, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) has provided \$8.6 billion for programmes; more than half of these funds are dedicated to HIV initiatives and nearly two thirds are used in low-income countries, mostly in sub-Saharan Africa. Pledges of \$9.7 billion for 2008–2010 made at the Berlin Global Fund donors’ meeting in October 2007 will enable the fund to triple in size.

Among multilateral donors, the Global Fund is the largest, and the World Bank has the next largest HIV and AIDS-related budget. From around 1990 through 2006, the World Bank had committed \$3.155 billion to HIV and AIDS, including considerable funding for ‘Four P’ activities.<sup>36</sup>

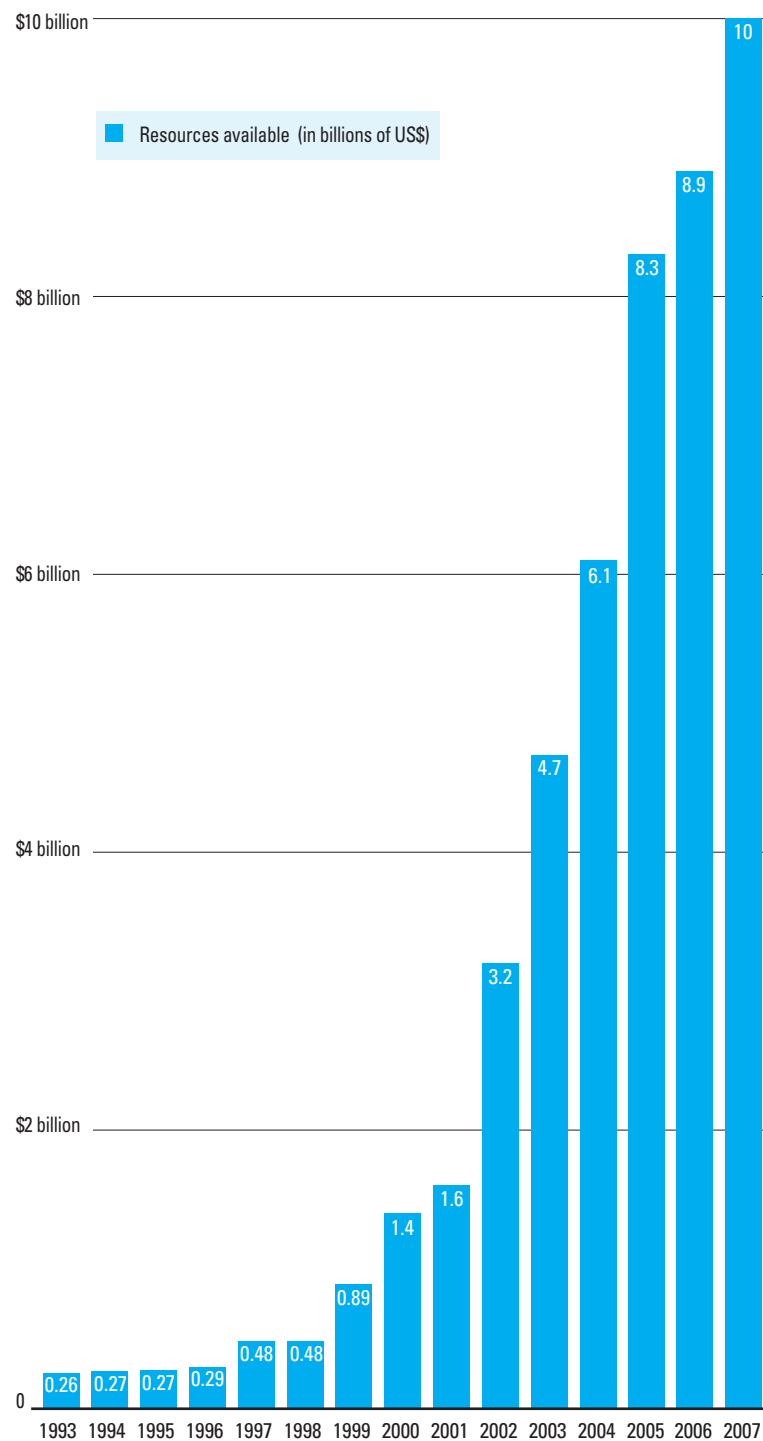
PEPFAR’s commitment to HIV and AIDS prevention, care and treatment was \$15 billion for 2004–2008,<sup>37</sup> and if plans are ratified by the US Congress, that amount will double for the 2009–2013 budget. PEPFAR’s funding directives allocate 10 per cent of its budget for orphans and vulnerable children, 20 per cent for prevention activities, 15 per cent for palliative care and 55 per cent for treatment.

UNITAID’s budget exceeded \$320 million in 2007 and could be as high as \$500 million by 2009. More than 90 per cent of funds were committed to new and ongoing programmes in 2007. UNITAID, an international drug purchase facility, was created in 2006 to pay for drugs and diagnostics with sustainable, predictable resources such as a tax on airplane tickets collected only for this purpose.

Every two years, the UNAIDS Programme Coordinating Board approves a unified budget and workplan that allocates funds for activities and identifies which agency or programme will be responsible for each activity. The core component of the unified budget for 2006–2007 was \$320.5 million.

In sum, the impact of AIDS on children has elicited a powerful emotional response and dramatic increases in funding during

**FIGURE 14: Total annual resources available for AIDS (1993–2007)**



Source: Joint United Nations Programme on HIV/AIDS, *Financial Resources Required to Achieve Universal Access to HIV Prevention, Treatment, Care and Support*, September 2007.

recent years. While this new money is welcome, it represents an 'emergency response' to an epidemic that could be with us for generations to come. Governments and donors will need to sustain a longer-term development perspective that both addresses children's immediate needs and strives to improve the conditions in which they grow up.

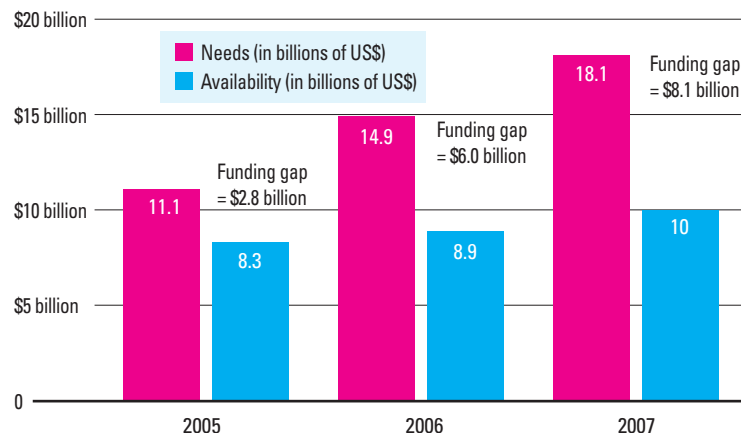
## Monitoring global expenditures on the 'Four Ps'

Two of the initial goals of *Unite for Children, Unite against AIDS* were to leverage the resources necessary to scale up programmes in the 'Four P' areas by mobilizing \$30 billion between 2005 and 2010, and to ensure that donors commit at least 10 per cent of their HIV and AIDS-related funds to children. The quantity and the quality of resources dedicated to programmes for children have increased significantly – funding is more timely, predictable and flexible, and it better addresses the specific programme needs of children and women.

But obtaining expenditure calculations necessary to report on the exact proportion of the global HIV and AIDS budget dedicated to children remains challenging. More accurate data disaggregated by age and sex are key to determining how much of budgetary resources is allocated to the needs of young children, adolescent boys and girls, and those who care for them – and to helping countries better direct their spending for children where interventions are most needed.

Resource tracking is important for monitoring and evaluation because it is an effective way of reducing the number of intermediaries involved, avoiding delays in the transfer of funds and monitoring whether disbursed funding is actually spent. New methods of conducting systematic monitoring of investments in the 'Four P' programme areas are emerging.

**FIGURE 15: Funding gap between resource needs and resource availability (2005–2007)**



Source: Joint United Nations Programme on HIV/AIDS, *Financial Resources Required to Achieve Universal Access to HIV Prevention, Treatment, Care and Support*, September 2007.

UNAIDS has expanded its National AIDS Spending Assessment (NASA) resource tracking method, which may be used to monitor the implementation of countries' national strategic plans and their progress towards the achievement of internationally or nationally adopted goals. The NASA methodology can accurately break down expenditures by age and sex and provide detailed reporting and analysis on each of the 'Four P' programme areas. In 2007, NASA country coverage was still too low to calculate total global spending on the 'Four Ps', but its expansion will make such global calculations possible during the coming years.

The Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) also tracks expenditures on HIV and AIDS for donors. The information, based on accurate and rigorously collected data, is broken down by multilateral and bilateral sources and is very useful for long-term analysis and reporting on historical expenditure trends. An increase in multilateral resources was identified after the Global Fund was established in 2002.

Major donors such as PEPFAR and the Global Fund are providing useful financial data related to the 'Four Ps'. PEPFAR now reports on the number of women receiving PMTCT services, the number of children under 15 receiving antiretroviral treatment, the number of orphans and vulnerable children served and related programme costs. The Global Fund proposals mostly reflect allocation of financial resources to three programmatic areas linked to children: PMTCT, paediatric treatment and prevention.

Contributions made by the governments and organizations mentioned above are crucial to accomplishments thus far and essential if global goals related to children and HIV and AIDS are to be reached by 2015.

## The funding gap and resource needs estimates for the 'Four Ps'

In determining the amount of resources needed for children, *Unite for Children, Unite against AIDS* financial goals are currently guided by the UNAIDS biennial resource needs estimates. In September 2007, UNAIDS published a new report, *Financial Resources Required to Achieve Universal Access to HIV Prevention, Treatment, Care and Support*, which forecasts resource needs for the 'Four P' areas from 2008 through 2010. Despite the marked increase in funds available, in 2006 there was a gap of \$6 billion between UNAIDS' estimates of resource needs and total resources available (see *Figure 15, page 32*). UNAIDS projected that over the next several years, the gap would become greater if current funding trends continued.<sup>38</sup>

In this report, UNAIDS presents scenarios for scale-up and lists costs of the many components linked to achieving universal access. Listed in Table 5 are the financial requirements directly related to children for two scenarios. The first includes calculations of funds necessary to reach universal access by 2010. The second is based on trends of scale-up over the past years; universal access for this scenario would be reached in 2015.

Decisions about resource allocation should be based on internal assessments of a country's unique circumstances and needs. For example, although global figures suggest that 12 per cent of all money should go towards supporting orphans and vulnerable children, more than nine tenths of the 12 per cent is for sub-Saharan Africa. It is also crucial to recognize that any estimates have limitations due to the limited availability of data about children and adolescents.



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**TABLE 5: UNAIDS resource needs estimates for activities directly related to children (US\$ millions)**

Scenario 1: Universal access by 2010	2008	2009	2010
Youth in school	103	124	145
Youth out of school	237	434	633
PMTCT	342	494	662
Child first-line ARV drugs	50	77	110
Financial resources needed for orphans and vulnerable children*	1,313	2,386	4,383
Education and sensitivity training for adolescents (violence against women)	68	259	574

Scenario 2: Phased scale-up towards universal access	2008	2009	2010
Youth in school	91	99	108
Youth out of school	116	192	269
PMTCT	342	494	662
Child first-line ARV drugs	40	53	66
Financial resources needed for orphans and vulnerable children*	1,258	1,764	2,540
Education and sensitivity training for adolescents (violence against women)	20	70	152

**Note:** Estimates for orphans and vulnerable children include all double orphans and half of single orphans living below the poverty line in sub-Saharan Africa and only children orphaned by AIDS elsewhere. 'Double orphans' refers to children who have lost both parents; 'single orphans' refers to children who have lost one parent.

**Source:** Joint United Nations Programme on HIV/AIDS, *Financial Resources Required to Achieve Universal Access to HIV Prevention, Treatment, Care and Support*, UNAIDS, Geneva, September 2007, pp. 22–24, 26.

## CHAPTER 7

# CONCLUSIONS

Over the two years since the call to *Unite for Children, Unite against AIDS* was first made, a trend has been emerging. Those who have the capacity to ramp up their engagement in the priority areas encapsulated in the 'Four Ps' are doing so. Children are no longer invisible to national governments, donors and international organizations. Robust initial efforts to make progress on the ground can be sustainable as long as they enjoy local support, fit local realities and strengthen local delivery structures.

As this stocktaking report has tried to show, strengthening communities and families is a central part of the response to the needs of children and adolescents in the path of the epidemic. The emphasis on high-impact interventions that deliver measurable results must be used to benefit not only children and adolescents whose vulnerability stems from HIV and AIDS, but also other children whose needs may be just as great, albeit from other causes.

This report also draws attention to the importance of continuing and improving current efforts to set the norms, standards and guidelines that will ensure proper and effective implementation of initiatives to scale up progress towards the targets set for each of the 'Four Ps'. All of those working to mitigate the impact of AIDS on children must continue to gather the evidence that will help all actors to 'know their epidemic' and develop the capacity to respond to the diverse challenges posed by epidemics that differ in character not only across regions, but also within countries.

The report contains other, more specific findings:

- Scale-up of PMTCT is possible in low- and middle-income countries. Of particular note in this report is the steady progress observed in Eastern and Southern Africa over the last three years. Combination antiretroviral treatment for pregnant women will reduce significantly the number of infected children and improve overall child well-being and survival, and more countries are adopting this approach.
- Delivery of HIV care and treatment services to children has greatly benefited from the global acceleration of the adult treatment agenda, the use of family-centred approaches in service delivery and the push for appropriate ART regimens for young children. Greater focus is now being placed on early infant diagnosis, given the excessive mortality in this age group, but there is still a need for operational guidance on consent, disclosure and psychosocial support for children living with HIV.

- While important progress has been made in preventing HIV among adolescents and young people, there is still a long way to go. HIV prevention in high-prevalence countries requires not only widespread individual knowledge, risk-reduction skills and access to services and commodities including condoms, but also changes in norms and attitudes in the entire community, particularly those surrounding gender roles and domestic violence. Especially where the spread of the epidemic is associated with sex work, injecting drug use, and high-risk sex between men, it is urgent that programmes to effect risk reduction and behaviour change among the adolescents and young people who are most at risk be expanded. There is also a need to improve the quality of population and behaviour surveys that capture information about high-risk behaviours.
- Available monitoring data show that the gap in school enrolment rates between children who have lost both parents and other children is closing in many countries. A growing number of vulnerable children have access to free services, including health, education and social protection. There is a need for laws, policies and services that help families and communities look after orphans. Significant gains have been made in coverage, but services are still reaching only a very small percentage of children and families in need. Stigma and discrimination are still rife in many areas. National scale-up of programmes that have proved to be effective is a continuing challenge but, if successful, may be the most important legacy of *Unite for Children, Unite against AIDS*.
- Recently, support for cash transfers as a means to mitigate the impact of AIDS has been growing. There is increasing evidence that these can make an important contribution to expanding access to education and improving the health and nutritional status of the most vulnerable children. The challenge now is to monitor and evaluate results and take them to scale whenever appropriate.



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Today's children and adolescents have never known a world free of AIDS. They are the most vulnerable to HIV infection, the least equipped to protect themselves against it and the ones with the biggest stake in stopping it. In the worst-affected countries, as boys and girls grow and develop from early childhood through their school-age years to puberty, adolescence and adulthood, they face difficult choices while pursuing safe and responsible sexual and gender behaviour. They will soon inherit the challenge of halting the spread of HIV, trying to fulfil the promise of an AIDS-free generation. They should be supported, listened to, allowed to influence the direction of the HIV and AIDS response, and given the tools they need to create this AIDS-free generation. This report documents encouraging progress in this direction, but there is still a long way to go.

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# ANNEX

## NOTE ON THE DATA

### DATA SOURCES AND COMPILATION

The data and analyses presented in this stocktaking report are derived from information in UNICEF's global databases and compiled from various sources, including nationally representative data collected from household surveys, e.g., Demographic and Health Surveys, Multiple Indicator Cluster Surveys and Reproductive Health Surveys, national programme service statistics, and implementation information collected annually by UNICEF and WHO through a standard PMTCT and paediatric HIV care and treatment questionnaire, on behalf of the Inter-Agency Task Team on PMTCT; country estimates of HIV care and treatment needs modelled by UNAIDS and WHO; and the United Nations Population Division country estimates of the number of annual births.

Detailed information about the household surveys is available at <[www.measuredhs.com](http://www.measuredhs.com)> and <[www.childinfo.org](http://www.childinfo.org)>, and technical descriptions of the epidemiological methodology used to estimate HIV care and treatment needs are available at <[www.unaids.org](http://www.unaids.org)>.

These data allow for a comprehensive assessment of progress being made towards the international goals of universal access to HIV care, treatment and support for children.

The World Health Organization, UNAIDS and UNICEF used PMTCT and paediatric HIV care and treatment data from 2005 to project coverage rates for 2006 in *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report, April 2007*. That is because the data available at the time the 2007 *Towards Universal Access* report was published did not cover the entire period of January–December 2006. Due to the need for a 12-month reporting period, 2005 data and some 2006 data were used to project coverage for the January–December 2006 calendar year. As many countries are going through rapid scale-up of PMTCT and paediatric HIV care and treatment services, the data presented in this stocktaking report are slightly different from data that appear in the 2007 edition of *Towards Universal Access*. This report uses the actual service coverage numbers as reported by most countries for the 12-month reporting period of January–December 2006.

### ESTIMATES ON HIV CARE AND TREATMENT NEEDS OF PREGNANT WOMEN AND CHILDREN

On 20 November 2007, UNAIDS and WHO released new global estimates of the numbers of people living with HIV, new infections and AIDS deaths. UNAIDS in 2007 refined the HIV and AIDS estimation methodology to reflect more reliable data available from population-based surveys and expanded national sentinel surveillance systems in a number of countries. As a result, UNAIDS has retrospectively generated new estimates for the past years based on the refined methodology. To achieve consistency and establish a comparative measurement of progress, trend analyses must be recalculated using only the newly generated estimates.

Similarly, global estimates of the number of women needing PMTCT services have been refined, and the coverage rates reported for 2004 and 2005 have thus been recalculated using the newly generated estimates. Estimates on the HIV care and treatment needs of children under 15 years old were not available at the time of publication. As a result, only the actual numbers of children reported to be receiving specific HIV-related interventions are presented in this report.

The new UNAIDS estimates for 2006 are lower than the estimates previously used to report on coverage of PMTCT and paediatric HIV care and treatment interventions. The differences in the 2006 and 2007 estimates are not related to trends over time and are therefore **not comparable**. For example, it is wrong to conclude that the estimated number of children living with HIV has decreased from 2.3 million in 2006 to 2.1 million in 2007 given that these estimates are not derived from the AIDS trends over time but from more refined epidemiological modelling procedures. More details on the HIV estimates methodology can be found at <[www.unaids.org](http://www.unaids.org)>.



## GOAL 1. Preventing mother-to-child transmission of HIV in low- and middle-income countries

	Estimated adult HIV prevalence rate (15–49 years), 2005	Antenatal care coverage (%), 2000–2006*	Annual number of births, 2006 (thousands)	Estimated number of HIV-infected pregnant women in need of ARVs for PMTCT, 2006z			Reported number of HIV-infected pregnant women who received ARVs for PMTCT, 2006	Estimated percentage of HIV-infected pregnant women who received ARVs for PMTCT, 2006**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Afghanistan	<0.1	16	1,272	<100	–	–	0	0	–	–
Albania	–	97	52	–	–	–	–	–	–	–
Algeria	0.1	89	694	<500	<500	783	–	–	–	–
Angola	3.7	66	792	14,094	8,948	19,080	1,923	14	10	21
Antigua and Barbuda	–	100	0	–	–	–	4	–	–	–
Argentina	0.6	99	690	1,654	1,153	2,255	2,120	>95	94	>95
Armenia	0.1	93	36	<100	<100	<100	5 d	–	–	–
Azerbaijan	0.1	70	129	<100	<100	<200	1	–	–	–
Bahamas	3.3	–	6	<100	<100	<200	–	–	–	–
Bahrain	–	97 x	13	–	–	–	–	–	–	–
Bangladesh	<0.1	48	4,013	<200	<100	<500	5 a	–	–	–
Barbados	1.5	100	3	<100	<100	<100	37	–	–	–
Belarus	0.3	99	91	<100	<100	<200	158	–	–	–
Belize	2.5	96 x	7	<200	<100	<500	57	–	–	–
Benin	1.2 h	88	358	4,497	3,882	5,278	2,378	53	45	61
Bhutan	<0.1	51	12	<100	<100	<100	3	–	–	–
Bolivia	0.1	79	264	<200	<200	<500	–	–	–	–
Bosnia and Herzegovina	<0.1	99	35	–	–	–	0	–	–	–
Botswana	25.2 h	97	47	11,370	10,526	12,286	12,994	>95	–	–
Brazil	0.5	97	3,720	9,222	5,829	13,361	6,510	71	49	>95
Brunei Darussalam	<0.1	100 x	8	–	–	–	–	–	–	–
Bulgaria	<0.1	–	69	–	–	–	–	–	–	–
Burkina Faso	1.8 h	85	641	3,029	2,014	4,221	1,615	53	38	80
Burundi	3.6 h	92	381	8,208	5,462	10,743	1,112	14	10	20
Cambodia	0.6 h	69	377	1,502	1,170	1,858	312	21	17	27
Cameroon	5.5 h	82	649	35,127	25,363	41,913	7,588	22	18	30
Cape Verde	–	99 x	15	–	–	–	43	–	–	–
Central African Republic	6.2 h	69	157	10,913	9,791	12,218	1,943	18	16	20
Chad	3.3 h	39	482	17,231	11,000	21,586	254	1	1	2
Chile	0.3	95 x	249	<500	<500	548	–	–	–	–
China	0.1	90	17,309	6,899	4,255	10,777	650	9	6	15
Colombia	0.6	94	884	2,452	1,488	4,363	112	5	3	8
Comoros	<0.1	75	28	<100	<100	<100	0	–	–	–
Congo	5.3	86	132	4,523	3,707	5,457	325	7	6	9
Congo, Democratic Republic of the	3.2	68	3,026	90,077	70,480	112,999	3,422	4	3	5
Cook Islands	–	–	0	–	–	–	–	–	–	–
Costa Rica	0.3	92	80	<200	<100	<500	21	–	–	–
Côte d'Ivoire	4.7 h	85	684	30,412	24,278	36,289	2,773	9	8	11
Croatia	<0.1	–	41	–	–	–	–	–	–	–
Cuba	0.1	100	121	<100	<100	<200	34	–	–	–
Djibouti	3.1	67	24	828	626	1,035	52	6	5	8
Dominica	–	100	0	–	–	–	1	–	–	–
Dominican Republic	1.0 h	99 x	231	1,798	1,367	2,342	738	41	32	54
Ecuador	0.3	84	285	<500	<500	759	213	–	–	–
Egypt	<0.1	70	1,828	<200	<100	<500	–	–	–	–
El Salvador	0.9	86	159	629	<500	1,057	193	31	18	53
Equatorial Guinea	3.2 h	86	19	712	527	953	103	14	11	20
Eritrea	2.4	70	186	2,433	1,624	3,592	75	3	2	5
Ethiopia	1.4 h	28	3,159	65,585	57,912	74,324	2,330	4	3	4
Fiji	0.1	–	18	<100	<100	<100	5	–	–	–
Gabon	7.9	94	34	2,300	1,651	3,316	89	4	3	5
Gambia	2.4	98	60	500	<500	780	103	21	13	44
Georgia	0.2	94	48	<100	<100	<100	15	–	–	–
Ghana	2.2 h	92	700	15,183	13,146	17,450	1,239	8	7	9
Grenada	–	100	2	–	–	–	–	–	–	–
Guatemala	0.9	84	445	1,925	1,185	3,472	167	9	5	14
Guinea	1.5 h	82	374	6,074	4,905	8,036	486	8	6	10
Guinea-Bissau	3.8	78	82	1,454	1,020	2,082	195	13	9	19
Guyana	2.4	90	13	<500	<500	519	144	–	–	–
Haiti	2.2 h	85	269	4,946	4,099	5,886	991	20	17	24
Honduras	1.5	92	199	656	<500	1,010	200	30	20	46
India	0.28 h	74	27,195	70,489	43,952	111,189	7,007	10	6	16
Indonesia	0.1	92	4,427	2,724	1,382	5,802	40	1	1	3
Iran (Islamic Republic of)	0.2	77 x	1,407	1,222	805	1,863	–	–	–	–

## GOAL 1. Preventing mother-to-child transmission of HIV in low- and middle-income countries

	Estimated adult HIV prevalence rate (15–49 years), 2005	Antenatal care coverage (%), 2000–2006*	Annual number of births, 2006 (thousands)	Estimated number of HIV-infected pregnant women in need of ARVs for PMTCT, 2006z			Reported number of HIV-infected pregnant women who received ARVs for PMTCT, 2006	Estimated percentage of HIV-infected pregnant women who received ARVs for PMTCT, 2006**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Iraq	–	84	937	–	–	–	–	–	–	
Jamaica	1.5	91	55	<500	<500	636	371	–	–	
Jordan	–	99	152	–	–	–	0	–	–	
Kazakhstan	0.1	100	289	<500	<200	566	80	–	–	
Kenya	6.7 h	88	1,447	77,799	66,593	88,223	37,130	48	42	56
Kiribati	–	88 x	0	–	–	–	–	–	–	–
Korea, Democratic People's Republic of	–	–	321	<100	<100	<200	–	–	–	–
Korea, Republic of	<0.1	–	455	<100	<100	<500	–	–	–	–
Kuwait	–	95 x	50	–	–	–	–	–	–	–
Kyrgyzstan	0.1	97	113	<100	<100	<200	9	–	–	–
Lao People's Democratic Republic	0.1	27	156	<200	<100	<500	–	–	–	–
Lebanon	0.1	96	74	<100	<100	<500	–	–	–	–
Lesotho	23.5 h	90	59	11,985	10,902	13,292	2,005	17	15	18
Liberia	–	85	184	2,830	2,188	3,481	76	3	2	3
Libyan Arab Jamahiriya	–	81 x	144	–	–	–	–	–	–	–
Madagascar	0.5	80	714	<500	<500	904	7	–	–	–
Malawi	12.7 h	92	566	67,316	58,121	76,957	9,231	14	12	16
Malaysia	0.5	79	556	1,159	737	1,813	170	15	9	23
Maldives	–	81	7	<100	<100	<100	–	–	–	–
Mali	1.3 h	57	579	8,426	6,893	10,346	656	8	6	10
Marshall Islands	–	–	0	–	–	–	–	–	–	–
Mauritania	0.7	64	102	<500	<500	787	12	–	–	–
Mauritius	0.6	–	19	<200	<100	<500	–	–	–	–
Mexico	0.3	86 x	2,109	3,073	1,663	5,835	146	5	3	9
Micronesia (Federated States of)	–	–	3	–	–	–	–	–	–	–
Moldova	1.1	98	44	<100	<100	<200	62	–	–	–
Mongolia	<0.1	99	49	<100	<100	<100	1	–	–	–
Montenegro	–	97	8	–	–	–	0	–	–	–
Morocco	0.1	68	635	<500	<200	585	–	–	–	–
Mozambique	16.1	85	856	95,482	79,656	112,694	12,150	13	11	15
Myanmar	1.3	76	897	2,907	2,077	3,952	993	34	25	48
Namibia	19.6	91	53	9,316	7,615	11,151	6,022	65	54	79
Nauru	–	–	0	–	–	–	–	–	–	–
Nepal	0.5	44	791	1,738	919	3,083	35	2	1	4
Nicaragua	0.2	86	139	<200	<100	<500	26	–	–	–
Niger	0.7 h	46	683	3,132	2,153	4,515	214	7	5	10
Nigeria	3.9	58	5,909	187,544	133,734	231,696	6,168	3	3	5
Niue	–	–	0	–	–	–	–	–	–	–
Occupied Palestinian Territory	–	99	143	–	–	–	–	–	–	–
Oman	–	100	57	–	–	–	–	–	–	–
Pakistan	0.1	36	4,358	2,089	1,137	4,265	8	<1	<1	1
Palau	–	–	0	–	–	–	–	–	–	–
Panama	0.9	72 x	70	<500	<500	513	–	–	–	–
Papua New Guinea	1.8	78 x	191	1,546	1,430	1,672	31 b	–	–	–
Paraguay	0.4	94	153	<500	<500	769	73	–	–	–
Peru	0.6	92	584	1,653	902	2,685	560	34	21	62
Philippines	<0.1	88	2,295	<500	<200	<500	–	–	–	–
Qatar	–	–	13	–	–	–	–	–	–	–
Romania	<0.1	94	213	<500	<200	<500	75	–	–	–
Russian Federation	1.1	–	1,506	7,223	3,525	15,697	6,224	86	40	>95
Rwanda	3.0 h	94	420	14,107	12,522	16,777	7,768	55	46	62
Saint Kitts and Nevis	–	100	1	–	–	–	–	–	–	–
Saint Lucia	–	99	3	–	–	–	–	–	–	–
Saint Vincent and the Grenadines	–	95	2	–	–	–	–	–	–	–
Samoa	–	–	5	–	–	–	–	–	–	–
Sao Tome and Principe	–	97	5	–	–	–	11	–	–	–
Saudi Arabia	–	90 x	612	–	–	–	–	–	–	–
Senegal	0.7 h	87	435	3,818	2,806	5,025	–	–	–	–
Serbia	–	98	126	–	–	–	2	–	–	–
Seychelles	–	–	3	–	–	–	–	–	–	–
Sierra Leone	1.5 h	81	262	4,212	3,233	5,535	354	8	6	11
Singapore	0.3	–	37	–	–	–	–	–	–	–
Solomon Islands	–	–	15	–	–	–	–	–	–	–
Somalia	0.9	26	371	900	<500	1,915	5	1	<1	1

## GOAL 1. Preventing mother-to-child transmission of HIV in low- and middle-income countries

	Estimated adult HIV prevalence rate (15–49 years), 2005	Antenatal care coverage (%), 2000–2006*	Annual number of births, 2006 (thousands)	Estimated number of HIV-infected pregnant women in need of ARVs for PMTCT, 2006z			Reported number of HIV-infected pregnant women who received ARVs for PMTCT, 2006	Estimated percentage of HIV-infected pregnant women who received ARVs for PMTCT, 2006**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
South Africa	16.2 h	92	1,102	222,415	186,658	258,165	111,357	50	43	60
Sri Lanka	<0.1	95	295	<100	<100	<100	1	–	–	–
Sudan	1.6	60	1,225	18,353	11,981	24,788	–	–	–	–
Suriname	1.9	91	9	<100	<100	<200	35	–	–	–
Swaziland	25.9 h	90	33	13,209	11,976	14,546	8,221	62	57	69
Syrian Arab Republic	–	84	529	–	–	–	–	–	–	–
Tajikistan	0.1	77	185	<200	<100	<500	4	–	–	–
Tanzania, United Republic of	7.0 h	78	1,589	99,775	92,091	107,699	14,758	15	14	16
Thailand	1.4	98	936	5,796	4,118	7,983	4,305 c	74	54	>95
The former Yugoslav Republic of Macedonia	<0.1	81	23	–	–	–	–	–	–	–
Timor-Leste	–	61	46	–	–	–	–	–	–	–
Togo	3.2	84	242	7,937	6,535	10,011	910	11	9	14
Tonga	–	–	3	–	–	–	–	–	–	–
Trinidad and Tobago	2.6	96	20	<200	<100	<500	–	–	–	–
Tunisia	0.1	92	172	<100	<100	<100	0	–	–	–
Turkey	–	81	1,378	–	–	–	4	–	–	–
Turkmenistan	<0.1	99	108	–	–	–	0	–	–	–
Tuvalu	–	–	0	–	–	–	–	–	–	–
Uganda	7.1 h	94	1,406	79,950	70,513	92,116	19,991	25	22	28
Ukraine	1.4	99	417	3,037	1,897	4,857	2,517	83	52	>95
United Arab Emirates	–	97 x	69	–	–	–	–	–	–	–
Uruguay	0.5	94 x	51	<200	<100	<500	53	–	–	–
Uzbekistan	0.2	99	619	<500	<200	1,041	22	–	–	–
Vanuatu	–	–	6	–	–	–	–	–	–	–
Venezuela (Bolivarian Republic of)	0.7	94	595	2,173	1,242	4,086	310	14	8	25
Viet Nam	0.5	91	1,654	3,796	2,335	6,456	1,385	36	21	59
Yemen	–	41	839	–	–	–	–	–	–	–
Zambia	15.6 h	93	470	73,668	65,911	82,984	25,578	35	31	39
Zimbabwe	18.1 h	95	372	59,327	54,031	64,481	10,127	17	16	19

### SUMMARY INDICATORS

Sub-Saharan Africa	6.1 †	69 †	29,889	–	–	–	–	–	–	–
Eastern and Southern Africa	8.6 †	71 †	14,074	927,370	801,760	1,061,939	282,784	31	27	35
West and Central Africa	3.5 †	67 †	15,815	440,319	329,761	543,974	30,957	7	6	9
Middle East and North Africa	0.2 †	72 †	9,617	869	650	1,105	52	6	5	8
South Asia	0.7 †	65 †	37,942	74,547	46,111	119,101	7,059	10	6	15
East Asia and Pacific	0.2 †	89 †	29,764	26,342	17,512	40,330	7,892	30	20	45
Latin America and Caribbean	0.6 †	94 †	11,418	33,061	21,508	51,115	13,117	40	26	61
CEE/CIS	0.6 †	90 †	5,529	11,578	6,128	23,554	9,173	79	39	>95
Low- and middle-income countries	–	–	–	1,514,086	1,223,431	1,841,120	351,034	23	19	29

### DEFINITIONS OF THE INDICATORS

**Estimated adult HIV prevalence rate:** Percentage of adults (15–49 years old) living with HIV as of end-2005.

**Antenatal care coverage:** Percentage of women (15–49 years old) attended at least once during pregnancy by skilled health personnel (doctors, nurses or midwives).

**Annual number of births:** Estimated number of live births in 2006.

**Estimated number of HIV-infected pregnant women:** Estimated number of pregnant women living with HIV as of 2006.

**Reported number of HIV-infected pregnant women who received ARVs for PMTCT:** Number of women testing HIV-positive during visits to antenatal clinics who were provided with antiretroviral therapy (ARVs) to prevent mother-to-child transmission.

**Estimated percentage of HIV-infected pregnant women who received ARVs for PMTCT:** Calculated by dividing the reported number of HIV-infected pregnant women who received ARVs for PMTCT by the estimated unrounded number of HIV-infected pregnant women in 2006. Ranges in coverage estimates are based on plausibility (uncertainty) bounds in the denominator, i.e., low and high estimated number of HIV-infected pregnant women. No coverage has been calculated where the number of HIV-infected pregnant women is estimated to be less than 500. For these countries, plausibility bounds in the denominator are very wide and PMTCT ARV coverage is likely to be unreliable.

### MAIN DATA SOURCES

**Estimated adult HIV prevalence rate:** UNICEF, *The State of the World's Children 2008*; UNAIDS, *AIDS Epidemic Update 2007*.

**Antenatal care coverage:** UNICEF, *The State of the World's Children 2008*.

**Annual number of births:** UNICEF, *The State of the World's Children 2008*.

**Estimated number of HIV-infected pregnant women:** UNAIDS/WHO unpublished estimates, 2007.

**Reported number of HIV-infected pregnant women who received ARVs for PMTCT:** UNICEF and WHO, 'A Report Card on Prevention of Mother-to-Child Transmission of HIV/AIDS and Paediatric HIV Care and Treatment in Low- and Middle-Income Countries, Progress on scaling up, 2004–2006' (forthcoming).

**Estimated percentage of HIV-infected pregnant women who received ARVs for PMTCT:** UNAIDS, UNICEF and WHO, 'Towards Universal Access: Scaling up HIV Treatment, Care and Prevention interventions in the health sector' (forthcoming); UNAIDS/WHO unpublished estimates, 2007.

### NOTES

– Data not available.

\* Data refer to the most recent year available during the period specified in the column heading.

\*\* United Nations General Assembly Special Session on HIV/AIDS (2001) indicator.

a Data were provided by an NGO and are not national-level data.

b Data were collected only from Port Moresby Hospital. Hence, coverage not calculated.

c Country report indicated only 80 per cent of data were reported.

d WHO Regional Office for Europe, *WHO/Europe Survey on HIV/AIDS and Antiretroviral Therapy*, 31 December 2006.

h HIV prevalence from population-based surveys conducted between 2001 and 2006.

x Data refer to years or periods other than those specified in the column heading, differ from the standard definition or refer to only part of a country.

z The needs estimates are based on the methods described in the annex. The estimates for individual countries may differ according to the estimation methods used.

† Regional averages are calculated for only the population representing 50 per cent or more of the region's total population of interest.

**GOAL 2. Providing paediatric treatment in low- and middle-income countries\***

	Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis within two months of birth, 2006	Reported number of children (0–14 years old) receiving ART, end 2006		Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis within two months of birth, 2006	Reported number of children (0–14 years old) receiving ART, end 2006
Afghanistan	0	0	Georgia	15	8
Albania	–	5 e	Ghana	–	122
Algeria	–	–	Grenada	–	–
Angola	–	361	Guatemala	–	840
Antigua and Barbuda	4	7	Guinea	416	100
Argentina	–	3,760	Guinea-Bissau	–	24
Armenia	–	2 e	Guyana	90	120
Azerbaijan	0	0	Haiti	–	867
Bahamas	–	–	Honduras	–	672
Bahrain	–	–	India	1,200	2,959
Bangladesh	5	1	Indonesia	20	1 b
Barbados	–	17	Iran (Islamic Republic of)	–	20 c
Belarus	–	57	Iraq	–	–
Belize	–	53	Jamaica	–	256
Benin	1,111	330	Jordan	0	3
Bhutan	0	0	Kazakhstan	85	25
Bolivia	–	–	Kenya	–	10,000
Bosnia and Herzegovina	0	0	Kiribati	–	–
Botswana	8,830	6,831	Korea, Democratic People's Republic of	–	–
Brazil	–	7,633	Korea, Republic of	–	–
Brunei Darussalam	–	–	Kuwait	–	–
Bulgaria	–	3 e	Kyrgyzstan	–	3
Burkina Faso	–	534	Lao People's Democratic Republic	–	3 b
Burundi	814	524	Lebanon	–	–
Cambodia	86	1,787	Lesotho	–	1,143
Cameroon	–	1,014	Liberia	–	–
Cape Verde	31	22	Libyan Arab Jamahiriya	–	–
Central African Republic	443	268	Madagascar	2	0
Chad	63	129	Malawi	60	5,763
Chile	–	–	Malaysia	–	510
China	650	410	Maldives	–	–
Colombia	–	–	Mali	–	691
Comoros	0	0	Marshall Islands	–	–
Congo	–	264	Mauritania	14	7
Congo, Democratic Republic of the	170	124	Mauritius	–	–
Cook Islands	–	–	Mexico	–	176
Costa Rica	40	52	Micronesia (Federated States of)	–	–
Côte d'Ivoire	–	1,348 a	Moldova	0	14
Croatia	–	5 e	Mongolia	0	0
Cuba	1	17	Montenegro	–	2
Djibouti	52	52	Morocco	–	–
Dominica	2	2	Mozambique	–	3,443
Dominican Republic	–	377	Myanmar	–	287
Ecuador	–	300	Namibia	–	3,932
Egypt	–	–	Nauru	–	–
El Salvador	122	297	Nepal	9	12
Equatorial Guinea	–	–	Nicaragua	26	26
Eritrea	–	84	Niger	–	46
Ethiopia	388	2,512	Nigeria	–	5,279
Fiji	2	2	Niue	–	–
Gabon	–	362	Occupied Palestinian Territory	–	–
Gambia	–	83	Oman	–	25 c

## GOAL 2. Providing paediatric treatment in low- and middle-income countries\*

	Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis within two months of birth, 2006	Reported number of children (0–14 years old) receiving ART, end 2006
Pakistan	0	10
Palau	–	–
Panama	–	214
Papua New Guinea	–	23 d
Paraguay	42	160
Peru	–	280
Philippines	–	–
Qatar	–	–
Romania	–	280
Russian Federation	–	330 c
Rwanda	1,209	2,757
Saint Kitts and Nevis	–	–
Saint Lucia	–	–
Saint Vincent and the Grenadines	–	–
Samoa	–	–
Sao Tome and Principe	3	3
Saudi Arabia	–	–
Senegal	–	228
Serbia	0	14
Seychelles	–	–
Sierra Leone	60	12
Singapore	–	–
Solomon Islands	–	–
Somalia	–	–
South Africa	–	23,369
Sri Lanka	1	0
Sudan	–	–
Suriname	–	61
Swaziland	725	1,155
Syrian Arab Republic	–	–
Tajikistan	0	0
Tanzania, United Republic of	–	3,576
Thailand	–	6,298 f
The former Yugoslav Republic of Macedonia	–	–
Timor-Leste	–	–
Togo	462	258
Tonga	–	–
Trinidad and Tobago	–	–
Tunisia	0	3
Turkey	0	9
Turkmenistan	–	0
Tuvalu	–	–
Uganda	–	7,800
Ukraine	800	650
United Arab Emirates	–	–
Uruguay	70	160
Uzbekistan	–	52
Vanuatu	–	–
Venezuela (Bolivarian Republic of)	–	611 g
Viet Nam	–	428
Yemen	–	–
Zambia	–	7,200
Zimbabwe	6,780	4,367

	Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis within two months of birth, 2006	Reported number of children (0–14 years old) receiving ART, end 2006
<b>SUMMARY INDICATORS</b>		
Sub-Saharan Africa	–	–
Eastern and Southern Africa	18,808	84,817
West and Central Africa	2,773	11,248
Middle East and North Africa	52	58
South Asia	1,215	2,982
East Asia and Pacific	758	9,749
Latin America and Caribbean	398	16,949
CEE/CIS	900	1,444
Low- and middle-income countries	24,904	127,247

### DEFINITIONS OF THE INDICATORS

**Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis:** Number of infants born to HIV-infected mothers started on cotrimoxazole prophylaxis within two months of birth.

**Reported number of children receiving ART:** Number of children (0–14 years old) living with HIV receiving ART as of 2006.

### MAIN DATA SOURCES

**Reported number of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis:** UNAIDS, UNICEF and WHO, 'Towards Universal Access: Scaling up HIV Treatment, Care and Prevention interventions in the health sector' (forthcoming).

**Reported number of children receiving ART:** UNAIDS, UNICEF and WHO, 'Towards Universal Access: Scaling up HIV Treatment, Care and Prevention interventions in the health sector' (forthcoming).

### NOTES

+ Typically this table would include the following estimates: Number of children living with HIV; Estimated percentage of infants born to HIV-infected pregnant women started on cotrimoxazole prophylaxis; Number of children living with HIV in need of ART; Percentage of children started on cotrimoxazole prophylaxis; and Percentage of children in need receiving ART. These estimates are still under review and were not available at the time of publication of this report.

– Data not available.

a Data reported are partial data from Elizabeth Glaser Pediatric AIDS Foundation and ACONDA-VS, an NGO, only and do not reflect national-level data.

b The most recent data available are from: Expanded Inter-Agency Task Team (IATT) on Prevention of HIV Infection in Pregnant Women, Mothers and their Children, "A Report Card on Prevention of Mother-to-Child Transmission of HIV and Paediatric HIV Care and Treatment in Low- and Middle-Income Countries, Scaling Up Progress from 2004 to 2005", Working Paper, UNICEF, New York, February 2007.

c The most recent data available are from UNAIDS/UNICEF/WHO, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector: Progress report, April 2007*.

d Data reported were from Port Moresby Hospital only and do not reflect national-level data.

e WHO Regional Office for Europe, *WHO/Europe Survey on HIV/AIDS and Antiretroviral Therapy*, 31 December 2006.

f Data are from 66 out of 76 provinces.

g Data reported are from WHO Region of the Americas.

## GOAL 3. Preventing infection among adolescents and young people

	HIV prevalence among young people (15–24 years old) **			Knowledge and behaviours					
				% of young people (15–24 years old) who have comprehensive knowledge of HIV (2000–2006)**		% of young people (15–24 years old) who used a condom at last higher-risk sex (2000–2006)**		% of young people (15–19 years old) who had sex before age 15 (2000–2006)**	
	Male (2005)	Female (2005)	Pregnant women in capital city (2001–2005*)	Male	Female	Male	Female	Male	Female
Afghanistan	–	–	–	–	–	–	–	–	–
Albania	–	–	–	–	6	–	–	–	–
Algeria	–	–	–	–	13	–	–	–	–
Angola	0.9	2.5	2.8	–	–	–	–	–	–
Antigua and Barbuda	–	–	–	–	–	–	–	–	–
Argentina	–	–	–	–	–	–	–	–	–
Armenia	–	–	–	15	23	86	–	3	<1
Azerbaijan	–	–	–	–	2	–	–	–	1
Bahamas	–	–	–	–	–	–	–	–	–
Bahrain	–	–	–	–	–	–	–	–	–
Bangladesh	–	–	–	–	16	–	–	–	–
Barbados	–	–	–	–	–	–	–	–	–
Belarus	–	–	–	–	34	–	–	–	–
Belize	–	–	–	–	–	–	–	–	–
Benin	0.4	1.1	1.7–2.1	35	16	44	17	12	13
Bhutan	–	–	–	–	–	–	–	–	–
Bolivia	–	–	–	18	15	37	20	15	6
Bosnia and Herzegovina	–	–	–	–	48	–	71	–	1
Botswana	5.7	15.3	33.5	33	40	88	75	–	–
Brazil	–	–	–	–	–	71	58	–	–
Brunei Darussalam	–	–	–	–	–	–	–	–	–
Bulgaria	–	–	–	15	17	70	57	–	–
Burkina Faso	0.5	1.4	1.8	23	19 r	67	64 r	5	7
Burundi	0.8	2.3	8.6	–	30	–	25	–	3
Cambodia	0.1 h	0.3 h	2.7	45	50	84	–	<1	1
Cameroon	1.4 h	4.8 h	7.0	34	32 r	57	62 r	12	13 r
Cape Verde	–	–	–	–	–	–	–	–	–
Central African Republic	2.5	7.3	14.0	–	17	–	41	–	29
Chad	0.9	2.2	3.6	20	8	25	17	11	19
Chile	–	–	–	–	–	–	–	–	–
China	–	–	–	–	–	–	–	–	–
Colombia	–	–	–	–	–	–	36	–	14
Comoros	<0.1	<0.1	–	–	18	–	–	–	–
Congo	1.2	3.7	3.0	22	10	36	16	25	24
Congo, Democratic Republic of the	0.8	2.2	3.2	–	–	–	–	–	–
Cook Islands	–	–	–	–	–	–	–	–	–
Costa Rica	–	–	5.2	–	–	–	–	–	–
Côte d'Ivoire	0.3 h	2.4 h	5.2	28	18	53	39	17	20
Croatia	–	–	–	–	–	–	–	–	–
Cuba	–	–	–	–	–	–	–	–	–
Djibouti	0.7	2.1	–	22	18 r	50	26	–	–
Dominica	–	–	–	–	–	–	–	–	–
Dominican Republic	0.4 h	0.7 h	–	–	36	52	29	18	13
Ecuador	–	–	–	–	–	–	–	–	7
Egypt	–	–	–	–	4	–	–	–	–
El Salvador	–	–	–	–	–	–	–	–	–
Equatorial Guinea	0.7	2.3	–	–	4	–	–	–	–
Eritrea	0.6	1.6	–	–	37	–	–	–	9
Ethiopia	0.3 h	1.2 h	11.5	33	21	50	28	2	11
Fiji	–	–	–	–	–	–	–	–	–
Gabon	1.8	5.4	–	22	24	48	33	48	24
Gambia	0.6	1.7	–	–	39	–	54	–	4
Georgia	–	–	–	–	–	–	–	–	–
Ghana	0.1 h	1.2 h	3.9	44	25 r	52	42 r	4	7 r
Grenada	–	–	–	–	–	–	–	–	–
Guatemala	–	–	–	–	–	–	–	15	7
Guinea	0.6 h	1.2 h	4.4	23	17	37	26	18	20
Guinea-Bissau	0.9	2.5	–	–	18	–	39	–	22
Guyana	–	–	–	47	53	68	62	–	–
Haiti	0.6 h	1.5 h	3.7	40	32	43	29	42	15
Honduras	–	–	–	–	30	–	24	19	10 r
India	–	–	–	36	20	37	22	3	8

## GOAL 3. Preventing infection among adolescents and young people

	Knowledge and behaviours								
	HIV prevalence among young people (15–24 years old) **			% of young people (15–24 years old) who have comprehensive knowledge of HIV (2000–2006)**		% of young people (15–24 years old) who used a condom at last higher-risk sex (2000–2006)**		% of young people (15–19 years old) who had sex before age 15 (2000–2006)**	
	Male (2005)	Female (2005)	Pregnant women in capital city (2001–2005*)	Male	Female	Male	Female	Male	Female
Indonesia	–	–	–	0	1	–	–	–	–
Iran (Islamic Republic of)	–	–	–	–	–	–	–	–	–
Iraq	–	–	–	–	3	–	–	–	–
Jamaica	–	–	–	–	60	–	–	–	–
Jordan	–	–	–	–	3	–	–	–	–
Kazakhstan	–	–	–	–	22	–	–	–	–
Kenya	1.3 h	5.9 h	–	47	34	47	25	31	15
Kiribati	–	–	–	–	–	–	–	–	–
Korea, Democratic People's Republic of	–	–	–	–	–	–	–	–	–
Korea, Republic of	–	–	–	–	–	–	–	–	–
Kuwait	–	–	–	–	–	–	–	–	–
Kyrgyzstan	–	–	–	–	20	–	56	–	<1
Lao People's Democratic Republic	–	–	–	–	–	–	–	–	–
Lebanon	–	–	–	–	–	–	–	–	–
Lesotho	6.0 h	15.4 h	27.3	18	26	53	53	30	16
Liberia	–	–	–	–	–	–	–	–	–
Libyan Arab Jamahiriya	–	–	–	–	–	–	–	–	–
Madagascar	0.6	0.3	–	16	19	12	5	20	32
Malawi	2.1 h	9.1 h	15.0	36	42 r	60	40	18	14 r
Malaysia	–	–	–	–	–	–	–	–	–
Maldives	–	–	–	–	–	–	–	–	–
Mali	0.4	1.2	2.5	15	9	30	14	11	26
Marshall Islands	–	–	–	–	–	–	–	–	–
Mauritania	0.2	0.5	–	–	–	–	–	2	13
Mauritius	–	–	–	–	–	–	–	–	–
Mexico	–	–	–	–	–	–	–	–	–
Micronesia (Federated States of)	–	–	–	–	–	–	–	–	–
Moldova	–	–	–	54	42	63	44	10	2
Mongolia	–	–	–	–	35	–	–	–	–
Montenegro	–	–	–	–	30	–	66	–	<1
Morocco	–	–	–	–	12	–	–	–	–
Mozambique	3.6	10.7	14.7	33	20	33	29	31	28
Myanmar	–	–	–	–	–	–	–	–	–
Namibia	4.4	13.4	7.5	41	31	69	48	31	10
Nauru	–	–	–	–	–	–	–	–	–
Nepal	–	–	–	44	28	78	–	3	6
Nicaragua	–	–	–	–	22	–	17	–	11
Niger	0.1 h	0.5 h	–	16	13	37	18	5	26
Nigeria	0.9	2.7	–	21	18	46	24	8	20
Niue	–	–	–	–	–	–	–	–	–
Occupied Palestinian Territory	–	–	–	–	–	–	–	–	–
Oman	–	–	–	–	–	–	–	–	–
Pakistan	–	–	–	–	–	–	–	–	–
Palau	–	–	–	–	–	–	–	–	–
Panama	–	–	–	–	–	–	–	–	–
Papua New Guinea	–	–	–	–	–	–	–	–	–
Paraguay	–	–	–	–	–	–	–	–	–
Peru	–	–	–	–	–	–	32	–	5
Philippines	–	–	–	18	12	25	11	3	1
Qatar	–	–	–	–	–	–	–	–	–
Romania	–	–	–	3	6	–	–	–	–
Russian Federation	–	–	–	–	–	–	–	–	–
Rwanda	0.4 h	1.5 h	10.3	54	51	40	26	15	5
Saint Kitts and Nevis	–	–	–	–	–	–	–	–	–
Saint Lucia	–	–	–	–	–	–	–	–	–
Saint Vincent and the Grenadines	–	–	–	–	–	–	–	–	–
Samoa	–	–	–	–	–	–	–	–	–
Sao Tome and Principe	–	–	–	–	44	–	56	–	9
Saudi Arabia	–	–	–	–	–	–	–	–	–
Senegal	0.2 h	0.6 h	0.9	24	19	52	36	13	9
Serbia	–	–	–	–	42	–	74	–	1
Seychelles	–	–	–	–	–	–	–	–	–

## GOAL 3. Preventing infection among adolescents and young people

	Knowledge and behaviours								
	HIV prevalence among young people (15–24 years old) **			% of young people (15–24 years old) who have comprehensive knowledge of HIV (2000–2006)**		% of young people (15–24 years old) who used a condom at last higher-risk sex (2000–2006)**		% of young people (15–19 years old) who had sex before age 15 (2000–2006)**	
	Male (2005)	Female (2005)	Pregnant women in capital city (2001–2005*)	Male	Female	Male	Female	Male	Female
Sierra Leone	0.4	1.1	3.2	–	17	–	20	–	25
Singapore	–	–	–	–	–	–	–	–	–
Solomon Islands	–	–	–	–	–	–	–	–	–
Somalia	0.2	0.6	–	–	4	–	–	–	–
South Africa	4.4 h	16.9 h	25.2	–	–	–	–	–	–
Sri Lanka	–	–	–	–	–	–	–	–	–
Sudan	–	–	–	–	–	–	–	–	–
Suriname	–	–	–	–	41	–	–	–	–
Swaziland	7.7	22.7	37.3	52	52	70	54	–	–
Syrian Arab Republic	–	–	–	–	7	–	–	–	–
Tajikistan	–	–	–	–	3	–	–	–	–
Tanzania, United Republic of	3.0 h	4.0 h	8.2	40	45	46	34	13	11
Thailand	–	–	–	–	46	–	–	–	–
The former Yugoslav Republic of Macedonia	–	–	–	–	27	–	70	–	1
Timor-Leste	–	–	–	–	–	–	–	–	–
Togo	0.8	2.2	9.3	–	28	–	50	–	12
Tonga	–	–	–	–	–	–	–	–	–
Trinidad and Tobago	–	–	–	–	54	–	51	–	5
Tunisia	–	–	–	–	–	–	–	–	–
Turkey	–	–	–	–	–	–	–	–	–
Turkmenistan	–	–	–	–	5	–	–	–	<1
Tuvalu	–	–	–	–	–	–	–	–	–
Uganda	1.1 h	4.3 h	5.2	38	32	55	53	16	12
Ukraine	–	–	–	–	28	–	–	–	–
United Arab Emirates	–	–	–	–	–	–	–	–	–
Uruguay	–	–	–	–	–	–	–	–	–
Uzbekistan	–	–	–	7	31 r	50	61 r	–	0
Vanuatu	–	–	–	–	–	–	–	–	–
Venezuela (Bolivarian Republic of)	–	–	–	–	–	–	–	–	–
Viet Nam	0.8 h	0.0 h	–	50	44 r	68	–	0.3	1
Yemen	–	–	–	–	–	–	–	–	–
Zambia	3.0 h	11.1 h	20.7	46	41	38	26	27	18
Zimbabwe	4.2 h	11.0 h	18.6	46	44	68	42	5	5
<b>SUMMARY INDICATORS†</b>									
Sub-Saharan Africa	1.4	4.3	9.7	31	25	47	31	13	17
Eastern and Southern Africa	2.1	6.2	13.5	37	31	46	32	15	14
West and Central Africa	0.7	2.3	4.0	24	19	47	31	12	19
Middle East and North Africa	–	–	–	–	–	–	–	–	–
South Asia	–	–	–	43	23	38	22	3	8
East Asia and Pacific	–	–	–	–	–	–	–	–	–
Latin America and Caribbean	–	–	–	–	–	–	47	–	–
CEE/CIS	–	–	–	–	–	–	–	–	–
Low- and middle-income countries	–	–	–	–	–	–	–	–	–

### DEFINITIONS OF THE INDICATORS

**HIV prevalence among young people:** Percentage of young men and women (15–24 years old) living with HIV as of end-2005.

**HIV prevalence among young pregnant women in capital city:** Percentage of blood samples taken from pregnant women (15–24 years old) who test positive for HIV during 'unlinked anonymous' sentinel surveillance at selected antenatal clinics.

**Comprehensive knowledge of HIV:** Percentage of young men and women (15–24 years old) 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.

**Condom use at last higher-risk sex:** Percentage of young men and women (15–24 years old) who say they used a condom the last time they had sex with a non-marital, non-cohabitating partner, of those who have had sex with such a partner in the past 12 months.

**Sex before age 15:** Percentage of young people (15–19 years old) who say they had sex before age 15.

### MAIN DATA SOURCES

**HIV prevalence among young people:** UNICEF, *The State of the World's Children 2008*.

**HIV prevalence among young pregnant women in capital city:** UNICEF, *The State of the World's Children 2008*.

**Comprehensive knowledge of HIV:** UNICEF global databases, 2008.

**Condom use at last higher-risk sex:** UNICEF global databases, 2008.

**Sex before age 15:** UNICEF global databases, 2008.

### NOTES

– Data not available.

\* Data refer to the most recent year available during the period specified in the column heading.

\*\* United Nations General Assembly Special Session on HIV/AIDS (2001) indicator.

h Data are from Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS) conducted between 2001 and 2006.

r Year of female data is more recent than year of male data.

† Regional averages are calculated only for the population representing 50 per cent or more of the region's total population of interest.



## GOAL 4. Protecting and supporting children affected by HIV and AIDS\*

	Orphan school attendance ratio (2000–2006)**	% of children whose households received external support (2004–2006)**‡		Orphan school attendance ratio (2000–2006)**	% of children whose households received external support (2004–2006)**‡
Afghanistan	–	–	Georgia	–	–
Albania	–	–	Ghana	90	–
Algeria	99	–	Grenada	–	–
Angola	90	–	Guatemala	–	–
Antigua and Barbuda	–	–	Guinea	73	–
Argentina	–	–	Guinea-Bissau	97	–
Armenia	–	–	Guyana	108	–
Azerbaijan	–	–	Haiti	86	–
Bahamas	–	–	Honduras	108	–
Bahrain	–	–	India	–	–
Bangladesh	84	–	Indonesia	82	–
Barbados	–	–	Iran (Islamic Republic of)	–	–
Belarus	101	–	Iraq	84	–
Belize	–	–	Jamaica	101	–
Benin	90	–	Jordan	–	–
Bhutan	–	–	Kazakhstan	98	–
Bolivia	74	–	Kenya	95	–
Bosnia and Herzegovina	101	–	Kiribati	–	–
Botswana	99	–	Korea, Democratic People's Republic of	–	–
Brazil	–	–	Korea, Republic of	–	–
Brunei Darussalam	–	–	Kuwait	–	–
Bulgaria	–	–	Kyrgyzstan	103	–
Burkina Faso	71	–	Lao People's Democratic Republic	–	–
Burundi	86	–	Lebanon	–	–
Cambodia	83	–	Lesotho	95	–
Cameroon	89	9	Liberia	–	–
Cape Verde	–	–	Libyan Arab Jamahiriya	–	–
Central African Republic	96	7	Madagascar	75	–
Chad	105	–	Malawi	97	19
Chile	–	–	Malaysia	–	–
China	–	–	Maldives	–	–
Colombia	85	–	Mali	104	–
Comoros	59	–	Marshall Islands	–	–
Congo	88	2	Mauritania	–	–
Congo, Democratic Republic of the	72	–	Mauritius	–	–
Cook Islands	–	–	Mexico	–	–
Costa Rica	–	–	Micronesia (Federated States of)	–	–
Côte d'Ivoire	79	9	Moldova	90	–
Croatia	–	–	Mongolia	96	–
Cuba	–	–	Montenegro	100	–
Djibouti	82	–	Morocco	–	–
Dominica	–	–	Mozambique	80	–
Dominican Republic	70	–	Myanmar	–	–
Ecuador	–	–	Namibia	92	–
Egypt	–	–	Nauru	–	–
El Salvador	–	–	Nepal	–	–
Equatorial Guinea	95	–	Nicaragua	106 p	–
Eritrea	83	–	Niger	67	–
Ethiopia	90	–	Nigeria	64 p	–
Fiji	–	–	Niue	–	–
Gabon	98	–	Occupied Palestinian Territory	–	–
Gambia	87	–	Oman	–	–

## GOAL 4. Protecting and supporting children affected by HIV and AIDS\*

	Orphan school attendance ratio (2000–2006)**	% of children whose households received external support (2004–2006)**†‡
Pakistan	–	–
Palau	–	–
Panama	–	–
Papua New Guinea	–	–
Paraguay	–	–
Peru	–	–
Philippines	–	–
Qatar	–	–
Romania	–	–
Russian Federation	–	–
Rwanda	82	–
Saint Kitts and Nevis	–	–
Saint Lucia	–	–
Saint Vincent and the Grenadines	–	–
Samoa	–	–
Sao Tome and Principe	109	–
Saudi Arabia	–	–
Senegal	83	–
Serbia	–	–
Seychelles	–	–
Sierra Leone	83	–
Singapore	–	–
Solomon Islands	–	–
Somalia	87	–
South Africa	–	–
Sri Lanka	–	–
Sudan	96	–
Suriname	97	–
Swaziland	91	41
Syrian Arab Republic	106	–
Tajikistan	92	–
Tanzania, United Republic of	102	–
Thailand	99	–
The former Yugoslav Republic of Macedonia	98	–
Timor-Leste	–	–
Togo	94	–
Tonga	–	–
Trinidad and Tobago	101	–
Tunisia	–	–
Turkey	–	–
Turkmenistan	100	–
Tuvalu	–	–
Uganda	94	11
Ukraine	98	–
United Arab Emirates	–	–
Uruguay	–	–
Uzbekistan	95	–
Vanuatu	–	–
Venezuela (Bolivarian Republic of)	–	–
Viet Nam	84	–

	Orphan school attendance ratio (2000–2006)**	% of children whose households received external support (2004–2006)**†‡
Yemen	–	–
Zambia	103	13
Zimbabwe	95	31

### SUMMARY INDICATORS†

Sub-Saharan Africa	80
Eastern and Southern Africa	84
West and Central Africa	76
Middle East and North Africa	–
South Asia	84
East Asia and Pacific	–
Latin America and Caribbean	–
CEE/CIS	–
Low- and middle-income countries	–

### DEFINITIONS OF THE INDICATORS

**Orphan school attendance ratio:** Percentage of children (10–14 years old) who have lost both biological parents and who are currently attending school as a percentage of non-orphaned children of the same age both of whose parents are alive and who live with at least one parent and are attending school.

**Percentage of children whose households received external support:** Percentage of orphaned and vulnerable children whose households received free basic external support in caring for the child.

### MAIN DATA SOURCES

**Orphan school attendance ratio:** UNICEF, *The State of the World's Children 2008*.

**Percentage of children whose households received external support:** AIS, DHS and MICS (2004–2006).

### NOTES

+ Typically this table would include the following estimates: Number of children who have lost one or both parents due to all causes; Number of children who have lost one or both parents due to AIDS; Number of children whose mother/father has died due to any cause; and Number of children both of whose parents have died due to any cause. These estimates are still under review and were not available at the time of publication of this report.

– Data not available.

\* Data refer to the most recent year available during the period specified in the column heading.

\*\* United Nations General Assembly Special Session on HIV/AIDS (2001) indicator.

† Data are presented only for countries with HIV prevalence of 5 per cent and above.

‡ Proportion of orphans (aged 10–14) attending school is based on small denominators (typically 25–49 unweighted cases).

† Regional averages are calculated only for the population representing 50 per cent or more of the region's total population of interest.



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