Children and AIDS

Fourth Stocktaking Report, 2009

UNITE FOR CHILDREN
UNITE AGAINST AIDS

CHILDREN AND AIDS: FOURTH STOCKTAKING REPORT, 2009

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I. INTRODUCTION

A generation of children free from AIDS is not impossible.

Years ago, when the devastating impact of the AIDS epidemic on children was just becoming apparent, there was no way to imagine an AIDS-free generation in the foreseeable future.

In 2005, the epidemic's consequences prompted UNICEF, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and other partners to launch *Unite for Children, Unite against AIDS*, a global campaign to focus attention and resources on mitigating the worst effects of HIV and AIDS on children and young people.

Four years into this effort, many lives have been saved or improved because national governments, non-governmental organizations, local communities and international organizations have been examining the evidence and responding. The prevention of mother-to-child transmission of HIV is a global objective.

Combination prevention – integrating behavioural, structural/social and biomedical approaches – can help to reduce HIV prevalence among young people. AIDS-sensitive, rather than AIDS-exclusive, interventions are being embraced in many places to benefit children affected by AIDS.

In the face of evidence showing how crucial it is for saving young lives, early infant diagnosis has been established as a priority and is now available to more infants than ever. With new evidence suggesting that peak AIDS mortality in infants may come at a very young age – two to three months in one study[1] – there is even more urgency to implement these recommendations.

Antiretroviral (ARV) regimens for the prevention of mother-to-child transmission (PMTCT) of HIV are now reaching 45 per cent of HIV-positive pregnant women globally. Coverage of HIV testing among pregnant women is 78 per cent in South Africa, 87 per cent in Botswana and 90 per cent in Namibia – all countries with high HIV prevalence.[2]

Attention to the needs of children affected by AIDS now figures prominently in programming. It is a driver of funding, recently prompting the Global Fund to Fight AIDS, Tuberculosis and Malaria, for example, to review its portfolio and increase support for more efficacious regimens for PMTCT. Children and families are highlighted in the UNAIDS Outcome Framework. All this would not have been the case only a few years ago.

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The world is not yet on track to meet targets for prevention, treatment, care and support

The advances that have been made are, of course, tempered by human, political, social and economic realities. Most countries will not meet the goals set out at the inception of *Unite for Children, Unite against AIDS* by the target year of 2010.

The economic crisis that emerged in 2008–2009 has raised concerns about how assistance for women and children will be sustained and expanded to reach universal access targets. If economic constraints were to suddenly put a halt to extending antiretroviral therapy (ART) to new recipients, this would mean no infants would receive treatment and no mothers receiving PMTCT services would start treatment for their own health.

If PMTCT were successful, there would be few new infections among newborns, but that goal remains far off. PMTCT coverage is up, but far too many women of childbearing age are still becoming infected with HIV and far too few HIV-positive pregnant women are receiving optimal regimens. Although there has been progress in HIV testing of mothers for PMTCT, the testing of mothers for their own health remains sporadic.[3] Exclusive breastfeeding, which can reduce the risk of HIV transmission from mother to child, is not widely practised.

The number of children receiving paediatric ART continues to increase. But the life-saving imperatives of early testing and initiation of treatment are not yet standard in most countries. In the areas of PMTCT and paediatric care, the number of women and children lost to follow-up is tragically high.

Progress on many prevention indicators related to young people has been slow. While work to assist orphans and other vulnerable children is increasingly funded, it is often constrained by weak systems and poor coordination.

Progress to date in PMTCT and paediatric HIV care and treatment has been uneven, underscoring inequities of access – to HIV testing and counselling, ARVs for PMTCT and ART for mothers and their children – and gaps in service coverage. There will be various paths to closing these gaps.

Improving the uptake of AIDS-related interventions requires enhancing health systems and linking them with communities

Key to identifying, diagnosing and starting treatment for the vast majority of children who are infected with HIV are improved health systems and better linkages with child health and survival programmes. These factors will also be crucial to attaining the Millennium Development Goals (MDGs).

Integrating the delivery of HIV-related services for both mothers and their babies remains a huge challenge. A comprehensive package of such services includes HIV testing and counselling during the antenatal period; PMTCT services for HIV-positive women; early infant diagnosis and treatment of babies in the first year of life; and care and support for adolescents living with HIV who may not fall under the purview of any particular system.

It is not only health-related systems that are implicated. Behaviour change – one of three elements of combination prevention – requires shared social norms that support safer behaviour and are endorsed by the community. Reaching

those people most at risk requires development of policies and legal frameworks to address discrimination.

Adequate support for children affected by HIV and AIDS means improving social welfare and social protection systems – including those for income transfers, alternatives to institutional care, and community and family-based care – for all children. All of these systems – health, political, legal and social welfare – need input and support from affected communities, and links between and among them.

Judicious investment is needed to ensure sustainable services and systems

To invest wisely in HIV and AIDS programmes for children at the country level, it is important to know the epidemic, the response, the cost and the results achieved so far. A best estimate by UNICEF of the resources needed to effectively address the requirements of women, children and young people is US$5.9 billion per year to reach universal access targets for the four 'Ps': preventing mother-to-child transmission, providing paediatric care and treatment, preventing infection among adolescents and young people, and protecting and supporting children affected by HIV and AIDS (*see Chapter VII*).

There is compelling evidence of the cost-effectiveness of prevention. A recent study based on modelling data projected that expanding prevention programmes could more than halve the number of HIV infections by 2015 and save US$24 billion in treatment costs.[4] Another study concluded that it is "inescapable" that prevention must be the key to any long-term response, given the overwhelming need for treatment by the year 2030 (55 million people) if current trends persist.[5] Other evidence demonstrates that primary prevention is particularly cost-effective in avoiding mother-to-child transmission.[6]

Judicious investment requires better analysis of the effectiveness in changing behaviour of programmes offered through schools, health and social services, the mass media and the community. Available data provide a guide, but there has been far too little measurement of programme impact.

A human rights-based approach to children and AIDS means addressing issues of equity of access

Universality and equity are cornerstones of child rights and must be re-emphasized in this 20th anniversary year of the Convention on the Rights of the Child. This means using an 'equity lens' to review progress towards universal access goals, upholding a standard of care and treatment for all and working towards an equitable distribution of resources. To do this, it is important to understand exactly who is being reached.

Data – disaggregated by age and sex – can help assess who is being missed and whether access to services is equitable. While some progress has been made in collecting disaggregated data, in many places there still are not enough details to strategically target programmes or assess their efficacy. Equity should be both a premise and an outcome of programming.

Services may exist, but children and families are often difficult to reach. Universal access targets must not perpetuate a standard whereby these same children and families keep falling through the cracks for all services. One recent analysis of most-at-risk populations in concentrated epidemics also found that only 4.7 per cent of prevention spending was allocated to programmes for intravenous drug users, 3.3 per cent to programmes for men having sex with men and 1.8 per cent to programmes for sex workers.[7]

We know that evidence such as this can translate into more effective action. But there is no satisfaction in battles half won. Families, local communities, national governments, non-governmental organizations and international institutions have shown they have the will and capacity to reverse the epidemic. It is now time to follow through on these commitments.

II. PREVENTION OF MOTHER-TO-CHILD TRANSMISSION

Decentralizing and strengthening health systems is essential to further expand services to prevent mother-to-child transmission of HIV.

PROGRESS AND ACHIEVEMENTS

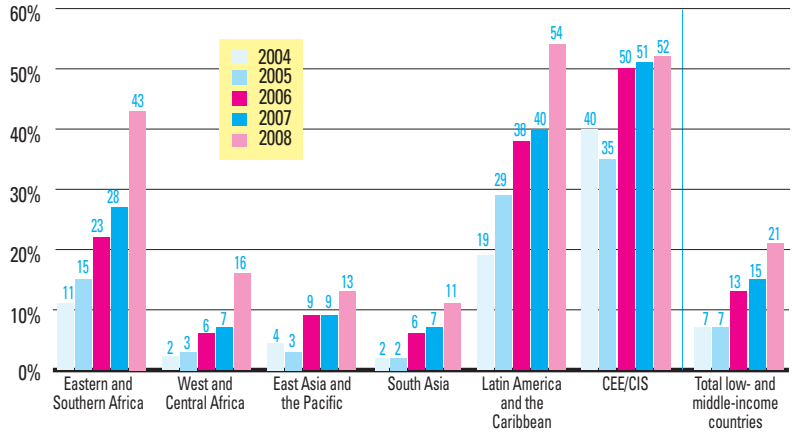
Coverage of services for PMTCT has increased steadily. In 2008, 19 countries had reached coverage rates of 80 per cent for HIV testing and counselling among pregnant women in need of services to prevent transmission of HIV to their infants.[8]

Overall, in 2008, 21 per cent of the estimated number of pregnant women living in low- and middle-income countries were tested for HIV, compared with 15 per cent in 2007 and 13 per cent in 2006 (*Figure 1*). Some 45 per cent of pregnant women living with HIV in these countries received antiretroviral (ARV) regimens – including antiretroviral therapy (ART) for their own health – to prevent the transmission of the virus to their infants, compared with 24 per cent in 2006 and 35 per cent in 2007 (*Figure 2*).[9]

The proportion of infants receiving ARVs for PMTCT increased between 2005 and 2008 in many countries with very high levels of HIV infection – particularly the Central African Republic, Mozambique, Swaziland and the United Republic of Tanzania – and in some low-prevalence countries, particularly China, Indonesia and Senegal. On average in 2008 in low- and middle-income countries, 32 per cent of infants born to HIV-positive mothers were given ARV prophylaxis for PMTCT at birth (*Figure 3*), up from 20 per cent in 2007 and 18 per cent in 2006.[10]

Yet, despite strong global progress and many successful local and national initiatives, many low- and middle-income countries are still not on track to reach the UN General Assembly Special Session on HIV/AIDS (UNGASS) target. The majority of women and children do not yet have access

Figure 1. Trends in percentage of pregnant women who received an HIV test, by region, 2004–2008



Note: Figures on the coverage of HIV testing among pregnant women were recalculated for previous years based on the revised estimates available. CEE/CIS, in this figure and others, is an acronym for Central and Eastern Europe and the Commonwealth of Independent States, a UNICEF region.

Source: UNICEF calculations based on data collected through the PMTCT and Paediatric HIV Care and Treatment Report Card process and reported in *Towards Universal Access: Scaling up HIV services for women and children in the health sector – Progress Report 2009* (WHO, UNAIDS, UNICEF). Regions were recalculated according to UNICEF classification of regions.

to basic PMTCT services, namely HIV testing and counselling, family planning, infant feeding counselling and support, and ARV prophylaxis.[11] Overcoming this deficit means closing gaps at the service delivery level – with special attention to the gaps between antenatal and delivery care; between maternal and infant interventions; and within the continuum of care focusing on links between ART, sexual and reproductive health services, and paediatric care, support and treatment.

MAIN ISSUES

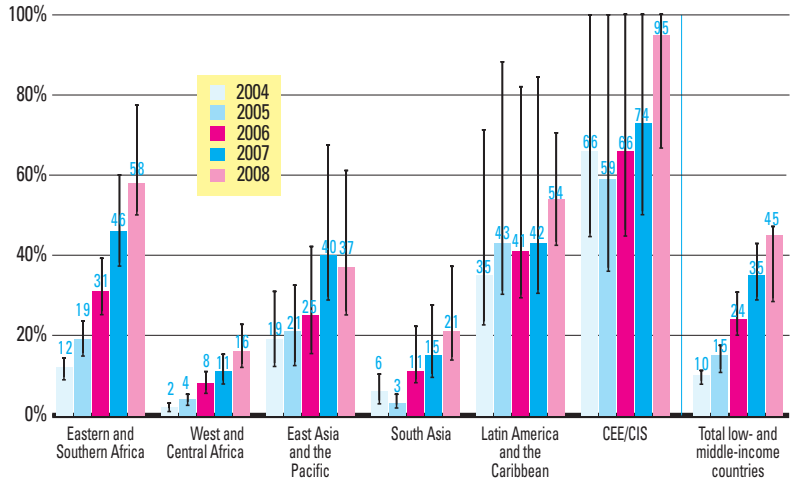
There is now a body of evidence regarding ways to overcome bottlenecks in PMTCT service provision. Experience in resource-limited countries that have made significant progress indicates that PMTCT programmes can be scaled up using strategic approaches including:

- Decentralizing programmes using the sub-national level as the unit of programme management, planning, coordination, implementation, and monitoring and evaluation.
- Building capacity and harmonizing actions, goals and outcomes within maternal, newborn and child health services.
- Scaling up innovations to service delivery.
- Making community-based interventions integral to national scale-up plans.

Successful scale-up of PMTCT services will depend on decentralization of planning, coordination and implementation

In most resource-limited countries, PMTCT services are primarily implemented on a small scale in major cities, with limited access for the majority of women and children living in rural areas. Available resources from national governments and implementing partners are centralized, and programme planning and coordination are carried out through a top-down approach. The main drawbacks have been weak accountability and responsiveness

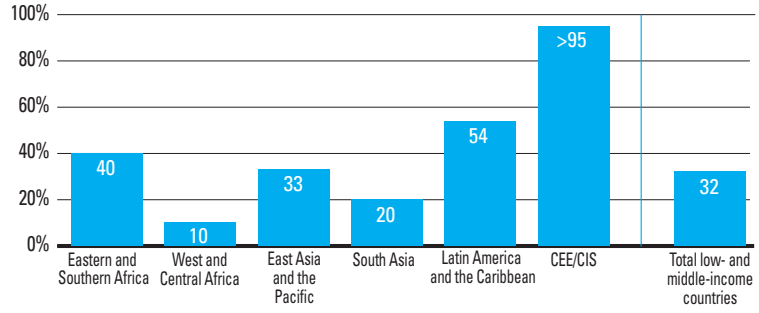
Figure 2. Trends in percentage of pregnant women with HIV receiving ARV prophylaxis for PMTCT, by region, 2004–2008



Note: The lines on the bars indicate the uncertainty bounds for the estimates.

Source: UNICEF calculations based on data collected through the PMTCT and Paediatric HIV Care and Treatment Report Card process and reported in *Towards Universal Access: Scaling up HIV services for women and children in the health sector – Progress Report 2009* (WHO, UNAIDS, UNICEF). Regions were recalculated according to UNICEF classification of regions.

Figure 3. Percentage of infants born to HIV-positive mothers given ARV prophylaxis for PMTCT at birth, 2008



Source: UNICEF calculations based on data collected through the PMTCT and Paediatric HIV Care and Treatment Report Card process and reported in *Towards Universal Access: Scaling up HIV services for women and children in the health sector – Progress Report 2009* (WHO, UNAIDS, UNICEF). Regions were recalculated according to UNICEF classification of regions.

in terms of programme management and implementation, including monitoring and evaluation.

Experience from some countries that have made substantial progress in expanding coverage of PMTCT services has shown that decentralization is a necessary prerequisite. Decentralization can foster managerial and technical efficiency, increase financial efficiency and accountability, promote innovation in service delivery and improve equity.[12]

In Rwanda, a combination of performance-based financing centred on district-level relationships (between health service providers, an independent purchasing organization and the administrative authorities), along with other health policy reforms to stimulate the demand for services, succeeded in increasing the rate of institutional delivery in two provinces

by more than 10 percentage points between 2001 and 2004 and in cutting patients' out-of-pocket costs substantially. There was also an increase in HIV testing, including couples testing, as well as increases in family planning and measles immunization coverage.[13]

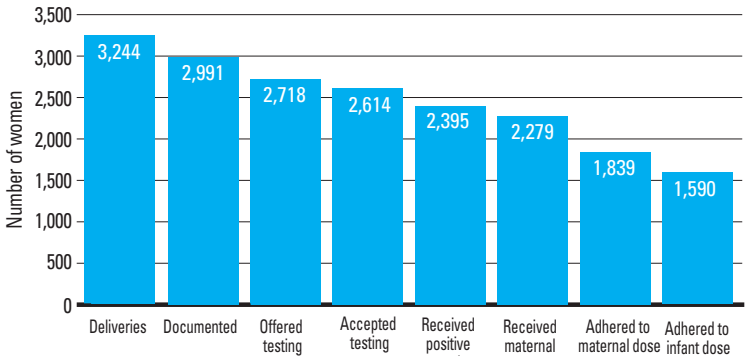
Zambia's National Scale-up Plan for PMTCT and Paediatric HIV Care Services for 2007–2010 is now being replicated at the district level, with population-based targets. As part of the decentralization process, provincial health directors are trained in PMTCT policy and programmatic issues. Their management teams are expected to coordinate and supervise; map priorities and integrate PMTCT activities into provincial plans; organize district training; manage logistics; and ensure programme monitoring and evaluation.[14]

Further expansion of PMTCT services depends on building capacity and harmonizing actions, goals and outcomes within maternal, newborn and child health services

The recent PEARL study of PMTCT effectiveness in Africa followed 3,244 HIV-positive pregnant women who delivered at health centres offering PMTCT services in Cameroon, Côte d'Ivoire, South Africa and Zambia. Only 1,839 mothers (57 per cent) and 1,590 infants (49 per cent) completed a full course of single-dose nevirapine. Reasons for the non-completion included that the HIV test was not being offered, testing was declined, the results were not given to the mother and maternal nevirapine was not dispensed (*Figure 4*).

Improving the performance of maternal, newborn and child health services in resource-limited settings is crucial to attaining UNGASS and MDG targets related to PMTCT. The priority for service delivery is to close gaps in the continuum of care by strengthening links between PMTCT and ART services, sexual and reproductive health services, immunization and other child survival interventions, and paediatric care, support and treatment. In Zambia,

Figure 4. PEARL Study on PMTCT effectiveness in Africa



Source: Stringer, Jeff, 'The PEARL Study: PMTCT effectiveness in Africa – Research and linkages to care and treatment', presentation delivered at the Regional Expert Consultation on Scaling Up Prevention of Mother-to-Child Transmission of HIV and Paediatric HIV Care and Treatment in Eastern and Southern Africa, Nairobi, 21 May 2009, and subsequently published as an abstract for the 2009 HIV/AIDS Implementers' Meeting (Windhoek, June 2009) and the 5th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention (Cape Town, July 2009).

a recent assessment conducted in eight public health centres in Lusaka District found that integrating delivery of ART into antenatal care settings doubled the proportion of ART-eligible pregnant women initiating treatment during their pregnancy.[15]

In countries with high HIV prevalence and limited resources, an integrated approach to providing services is both practical and feasible. This entails the development of appropriate policies, equipping laboratories, providing both clinical and immunological assessment for HIV and initiating ART at the service-delivery level. An integrated approach also requires building capacity to replace single-dose nevirapine with more efficacious ARV regimens for PMTCT and establishing links with local communities.

In low-prevalence settings such as Cambodia and China, a linked approach based on a strong referral system among health facilities, points-of-service delivery and communities has been effective. In Guangxi Province in China, where HIV testing and coverage were low and where there were gaps between antenatal care clinics and HIV and AIDS care and treatment programmes, efforts to help scale up a comprehensive PMTCT programme by linking various health services have yielded results. High percentages of women are now being tested and offered treatment if positive. A key factor has been the establishment of organizational links between the Maternal and Child Health branch of the national health system, the Chinese Center for Disease Control and Prevention (which covers HIV prevention), the National Free Antiretroviral Treatment Programme, and care and support services.[16]

Building health systems capacity requires supportive political leadership, innovation in programme financing, particularly at the sub-national level, and addressing the shortage of health-care workers through practical approaches such as task-shifting and task-sharing.

Innovation is increasingly being used to address programme bottlenecks, particularly in service delivery

The use of mobile phone technology to aid PMTCT and paediatric HIV care, support and treatment has great potential in places with limited financial and human resources and limited laboratory infrastructures. Efforts to date have focused on encouraging women to return to health centres, tracking women and children within and among health centres, and improving communication of test results between points of service and laboratories. The Elizabeth Glaser Pediatric AIDS Foundation has introduced one such innovative approach in Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo and Zambia.

National programmes have adopted innovative ways of overcoming bottlenecks to the uptake of PMTCT-related drugs, infant feeding counselling and support, access to CD4 cell-count testing, and the engagement of male partners. The Zambia Prevention, Care and Treatment Partnership has assisted the Ministry of Health of Zambia in establishing motorcycle-based transport systems for blood samples to increase access to ART-related laboratory tests, including CD4 cell counts for HIV-positive pregnant women, and to communicate results.

In Haiti, a community network of women health agents, *ajan fanm*, links health centres to hospitals. Identified by community leaders, *ajan fanm* visit pregnant women in their homes and refer them for HIV testing. They assist HIV-positive pregnant women with adherence to treatment and try to ensure that newborns are placed on prophylaxis within 72 hours of birth, accompanying mother and baby to hospital when the birth takes place in the home.

Innovations in drug packaging lead to use of more efficacious regimens for PMTCT in Lesotho

To increase uptake of more efficacious ARV regimens for PMTCT, the Government of Lesotho introduced a locally assembled mother-baby pack containing all the medicines needed for the PMTCT programme. Since June 2007, the medicines have been packed in brown envelopes by health-care providers at health facilities and given to pregnant women who are HIV-positive at their first antenatal care visit.

UNICEF and partners are in the process of developing a similar mother-baby pack to increase coverage of PMTCT services. In line with World Health Organization (WHO) guidelines, the new pack will contain the ARVs and cotrimoxazole needed by mothers during the antenatal period and by mothers and infants during the labour/intra-partum and post-partum periods. There is now consensus on a prototype, which is being tested in the field. A formal assessment of Lesotho's initiative is under way. Findings will be used to inform the overall development and roll-out of the global mother-baby pack.

Community-based interventions must be integral to national scale-up strategies

Local communities, including faith-based organizations and persons living with HIV, have played a leading role in making PMTCT a priority of countries' national responses. In many resource-limited settings, non-traditional service providers have taken over key activities such as HIV counselling, support for adherence to treatment, infant feeding counselling, nutrition support and home-based care. This has helped relieve health-care workers of a growing workload pressure. But there has been scant attention to making such community-driven activities integral to national scale-up strategies, and to ensuring that their implementation is part of a comprehensive and decentralized approach.

Local communities, for example, can provide essential support to HIV-positive mothers who have to choose among infant feeding options. Promoting exclusive breastfeeding and the elimination of mixed feeding, which increases the risk of HIV transmission, can occur within PMTCT services by using close links to community-based maternal and child health and nutrition programmes. Behaviour-change communication strategies aimed at the community and delivered through mothers' support groups and other existing community structures can have a critical role in reinforcing messages delivered at health facilities.[17]

In Lesotho and Rwanda, community mobilization has been instrumental in involving male partners in PMTCT processes and in increasing the uptake of testing among these men.[18] In Lesotho, community mobilization and the participation of men in peer support groups have also contributed to reduced stigma about PMTCT, increased testing of infants and improved rates of exclusive breastfeeding.[19]

Reaching PMTCT goals requires going beyond exclusive management of HIV and AIDS issues among women and children

Improving overall maternal and child health and survival in the context of HIV requires that pregnant women and HIV-positive mothers and their children be provided with essential preventive and primary health care for conditions other than HIV and conditions that are dangerous to women and children infected with HIV. This includes detection and treatment of malaria, syphilis and tuberculosis, as well as management of injecting drug use among pregnant women.

In places where malaria is endemic, HIV-malaria co-morbidity can be addressed effectively in antenatal and delivery-care settings through the distribution of insecticide-treated mosquito nets, intermittent preventive treatment of malaria among pregnant women in their second and third trimesters, the use of the common antibiotic cotrimoxazole as prophylaxis in children, and improved malaria case management.

In Zambia, applying the results of PMTCT-related research to programmes was associated with improved antenatal syphilis screening (RPR) coverage.[20] In Soweto, South Africa, symptomatic screening for tuberculosis (TB) offered as a routine component of care during HIV post-test counselling led to the detection of active TB cases among HIV-positive pregnant women.[21]

In Eastern Europe and Central Asia, it is estimated that 35 per cent of women living with HIV were infected through the use of injecting drug equipment that was contaminated, and about 50 per cent acquired HIV through unprotected sex with drug-injecting partners.[22] In these settings, scaling up PMTCT requires innovative approaches to reach these most-at-risk women and strong links with opioid substitution treatment centres.

The current global economic downturn underscores the need to address the long-term sustainability of PMTCT services

Universal access to PMTCT services is an achievable goal when it is supported by national leadership, commitment and resources. With the recent economic downturn, the problem of financial sustainability of programmes that are highly dependent on external funding resonates more than ever before. PMTCT programmes are particularly dependent on external funding for the purchase of drugs and other commodities, an area identified by the World Bank in its global financial outlook as being especially vulnerable.[23]

For most resource-limited countries, there is an urgency to determine the actual cost and impact of national PMTCT programmes in order to guide governments in setting fiscal policies. Such an analysis needs to pay special attention to the predictability of internal and external funding, human resources policies and financing mechanisms, in particular at the decentralized level. Such policy reforms as abolition of user fees for maternal, newborn and child health care, as well as progressive social protection initiatives and health insurance, are important to overcoming demand-side bottlenecks and ensuring equity. Yet these measures must also be assessed for their impact on the overall costs of scaled-up PMTCT initiatives – and for the drive towards universal access and the elimination of mother-to-child transmission.

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Global health initiatives, such as the US President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the International Health Partnership are contributing to strengthening existing systems and facilitating national efforts to ensure sustainability. They do this by promoting strong political leadership, addressing the shortage of health-care workers, establishing innovative health financing mechanisms, and supporting national governments in their efforts to improve equipment, optimize working conditions, and engage civil society, people living with HIV and AIDS, male partners of women living with HIV and communities.[24]

REMAINING CHALLENGES AND THE WAY FORWARD

Emerging scientific and programmatic evidence points to challenges in making the necessary system improvements that will enable the achievement of universal access goals for PMTCT. Immunological assessment using CD4 cell counts is not widely available in antenatal facilities, which explains why many HIV-positive women do not have access to ART for their own health and partly explains why nevirapine is still often given to mothers for PMTCT when combination regimens are more effective. Moreover, many women identified as HIV-positive within the context of PMTCT programmes are lost to follow-up during the 'cascade' of interventions required for effective prevention of HIV transmission to their infants.

Additionally, many PMTCT programmes do not include strategies to identify women who become infected with HIV after initial tests are negative, although there is some evidence showing the occurrence of new infections among previously HIV-negative women during pregnancy and in the first post-partum year.[25] In view of this finding, in generalized epidemic settings, routine HIV re-testing should be considered for HIV-negative women in the third trimester of pregnancy or during labour, and in the post-partum period at the 4- and 9-month child immunization visits for women who breastfeed. A research priority should be to identify appropriate ARV regimens for women who become infected with HIV during pregnancy and the safest infant feeding recommendations for those who become infected while breastfeeding.

Recent evidence from clinical trials, observational studies and programmes indicates that ART given to HIV-positive women during pregnancy and lactation and ARVs given to children in the first months of life could significantly reduce the rate of HIV transmission through breastfeeding.[26] But many countries do not promote exclusive breastfeeding or offer counselling and support on infant feeding as part of PMTCT programmes. WHO convened an expert consultation in late 2009 to review new evidence and revise guidelines on the use of antiretroviral drugs to treat pregnant women and prevent HIV infection in infants, with special attention to the role of ART and ARV prophylaxis in reducing breastfeeding-associated HIV transmission.

Making PMTCT services widely available to the women, children and families who need them will require closing gaps in service delivery, the effective decentralization of policy, planning and coordination to the sub-national level, and bringing together health centres, health workers and communities. Global partnerships need to be translated into concerted action at the country level, and financial resources made available so that small projects and pilot initiatives can be brought to scale as national programmes.

Pending questions must also be answered on the cost of effective PMTCT programmes and the impact of programmes on infections averted and the HIV-free survival of exposed children. Building on emerging scientific and programme evidence and defining priorities for operational research are crucial to removing the remaining bottlenecks to PMTCT scale-up.

III. PAEDIATRIC CARE AND TREATMENT

Significant progress in expanding access to early infant diagnosis is not matched by progress in linking it to early treatment.

PROGRESS AND ACHIEVEMENTS

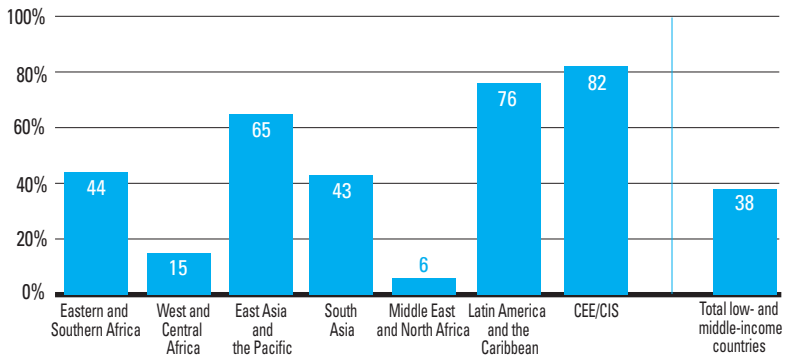
The number of children initiated on antiretroviral treatment has increased significantly over the past few years. While only 75,000 infected children under 15 years of age were receiving treatment in 2005, and 198,000 in 2007, the number had reached 275,700 by the end of 2008 – or 38 per cent – out of a total of 730,000 children infected with HIV and in need of treatment (*Figure 5*). This represents an increase of 39 per cent from the end of 2007 to the end of 2008 alone.[27]

Increases in the proportion of infants and children placed on treatment between 2005 and 2008 have been particularly remarkable in countries with very high levels of HIV infection, notably Lesotho, Mozambique, South Africa and the United Republic of Tanzania for children under 15 receiving ART. In low-prevalence countries, impressive increases between 2005 and 2008 were also noted in the Gambia, Honduras, and Indonesia.[28]

Given new evidence suggesting that peak AIDS mortality in infants may come at a very young age – two to three months in one study[29] – there is even more urgency for early infant diagnosis. Many countries are in the process of scaling up accordingly. In 2008, 83 of 123 reporting countries had the capacity to provide HIV viral testing to infants within two months of birth, up from 57 of 109 reporting countries in 2007.[30]

In addition to improved access to early infant diagnosis and ART, other paediatric HIV care interventions have also seen significant expansion. Initiation of cotrimoxazole prophylaxis within two months of birth for HIV-exposed infants, as recommended by WHO guidelines, increased from an estimated 4 per cent reported in 2007 to 8 per cent at the end of 2008. In 31 countries reporting data in 2007 and 2008, representing 26 per cent of the total number of pregnant

Figure 5. Percentage of children under 15 years old receiving antiretroviral therapy, 2008



Source: UNICEF calculations based on data collected through the PMTCT and Paediatric HIV Care and Treatment Report Card process and reported in *Towards Universal Access: Scaling up HIV services for women and children in the health sector – Progress Report 2009* (WHO, UNAIDS, UNICEF). Regions were recalculated according to UNICEF classification of regions.

women with HIV, the number of infants initiating cotrimoxazole prophylaxis within the first two months of life rose by more than half, from 52,100 in 2007 to 80,500 in 2008.[31]

Although paediatric HIV infection continues to affect child mortality, particularly in sub-Saharan Africa (where approximately 90 per cent of paediatric infections occur), scaled-up programmes to prevent mother-to-child transmission and an increase in paediatric HIV care and treatment services may have contributed to declining under-five mortality in some countries with a high prevalence of HIV.[32]

MAIN ISSUES

The devastating problems associated with loss to follow-up necessitate new approaches and immediate action

While enormous investment is taking place globally to ensure that less costly, age-appropriate drugs and services for HIV-exposed and infected children are available, this investment will not be effectively realized if children who have been identified as in need and who have been referred to services do not access them. Yet systems to enable follow-up of pregnant women and children have traditionally been an area of weakness for many countries, resulting in many children not receiving the services they so critically need.

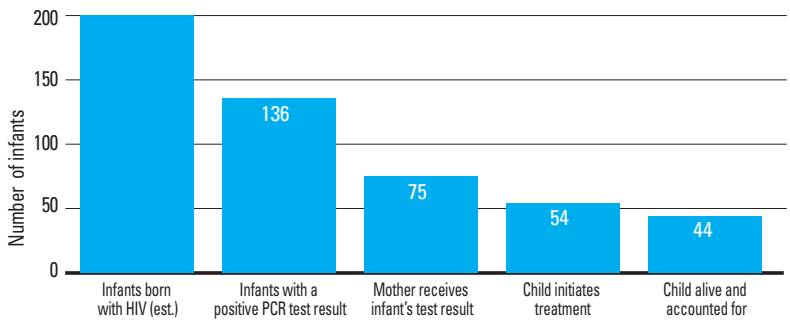
Early infant diagnosis of HIV, however, is a crucial step in the continuum of care and an essential link to ART. While many countries have made strides in providing access to early infant diagnosis, many infants with a positive diagnosis of HIV have not been connected to life-saving treatment.

A recent study of 11 sites in Cameroon by the Department of Disease Control, Ministry of Health in conjunction with the Clinton Foundation HIV/AIDS Initiative found that only 32 per cent of infants with a positive polymerase chain reaction (PCR) test result were alive and undergoing treatment almost one and a half years after December 2007, when data collection began on the provision of HIV early diagnosis services. The greatest loss to follow-up of infants in care (45 per cent) occurred even before the mother received her child's positive test result (*Figure 6*).[33] Similar results were found in Swaziland.[34] A separate study carried out by the Clinton Foundation and based on a meta-analysis of patient data from eight countries estimated loss to follow-up after testing positive of about 53 per cent.[35]

Loss to follow-up represents both significant avoidable child death and a massive loss of investment in infrastructure, commodities and health-care worker time. The finding in Cameroon that so many children were lost to follow-up after testing positive but prior to receiving results was further analysed: While sample turnaround time (greater than 30 days, which is longer than optimal) was one factor, others included clinical organization and data flow of results, lack of caregiver contact information, stigma and counselling challenges, the burden on patients to return for results, and weak follow-up within clinics to ensure that caregivers received results after they had been returned to the clinic from the laboratory. Cameroon's Government is now taking significant steps based on these analyses to improve follow-up of young patients.[36]

To make sure that children exposed to or infected with HIV are receiving the services they need, countries are beginning to direct their attention towards developing systems to ensure better follow-up, including such proven methods as using HIV-specific information on antenatal and child health cards to facilitate clinical follow-up; integrating HIV interventions into existing child health services and adult HIV-treatment centres; strengthening laboratory capacity; and developing networks of laboratories to benefit mothers and children in areas where these services are not available.

Figure 6. Summary of infant retention throughout the continuum: Cameroon study



Note: There were an estimated 36,000 HIV-positive pregnant women in Cameroon in 2008, but fewer than 4,000 infants were tested. The estimate for 'Infants born with HIV' is unavailable.

Source: Department of Disease Control, Ministry of Health, Cameroon, based on December 2007–May 2009 data.

Public-private partnership enhances laboratory capacity

Laboratory services are essential to the initiation and monitoring of treatment. In 2007, the Centers for Disease Control and Prevention (through PEPFAR) and Becton, Dickinson and Company launched a five-year, US$18 million partnership to improve laboratory systems and services in African countries severely affected by HIV/AIDS and tuberculosis.

The partnership, initiated in Côte d'Ivoire, Ethiopia, Kenya, Malawi, Mozambique, South Africa, Uganda and the United Republic of Tanzania, is significantly expanding the number of health-care workers trained to provide quality HIV testing and TB diagnostics. It is also providing curricula and trainers to assist the PEPFAR-sponsored African Center for Integrated Laboratory Training in Johannesburg, South Africa. In Uganda, the partnership is helping develop a specimen referral system to assist in both HIV and tuberculosis care and treatment delivery. Global Positioning System/Global Information System technology is being used to map laboratory sites so that an effective transportation network for specimens can be implemented.[39]

They are also employing innovative approaches to ensure that a greater proportion of HIV-exposed infants receive crucial follow-up. These include peer-to-peer support, such as that provided by mothers2mothers, a programme initiated in South Africa. The group uses an early infant diagnosis 'wheel' to give mothers a specific date to return for infant testing.[37] Other approaches including health camps – used in India – have also identified and referred for treatment large numbers of children living with HIV.[38]

Two countries with high HIV prevalence are using mobile phone technology to improve services. An initiative in Malawi uses RapidSMS (short text messaging) for mobile data collection and bulk SMS to promote HIV testing among children of HIV-positive mothers when those children arrive at nutrition programmes showing symptoms of severe acute malnutrition. Zambia is preparing an initiative focusing on providing comprehensive health services and care for children under five years old.

Public-private partnerships have also been instrumental in increasing capacity for improved follow-up of HIV-exposed and infected children. They have been particularly effective in developing the laboratory capacity that is crucial to improving testing and diagnosis of children exposed to HIV (*see panel*).

To be effective, paediatric care and treatment interventions need to become an integral part of infant and child survival and health programmes

HIV-free survival, the concept of averting both HIV infection and death, is most likely to be achieved if HIV-related services are provided at the same location where other child survival services are offered.[40] Primarily in countries with high HIV prevalence, providing HIV services in maternal and child health clinics – the most common places where women and young children are seen – increases the likelihood that HIV-exposed and infected children will receive both the HIV-related care and the routine child-survival interventions that are essential to their health.[41]

Building the capacity of health workers is crucial for scaling up HIV prevention, care and treatment services. Tools provided by WHO's Integrated Management of Adolescent and Adult Illness/Integrated Management of Childhood Illness (IMAI/IMCI) simplify ways to build health workers' clinical skills to identify and manage HIV-exposed and infected children. These tools target health workers at the primary level and support service decentralization, family-focused care, and follow-up of HIV-exposed and infected children and their mothers over time. IMAI tools have been adapted for use in more than 25 countries.

Emerging analysis indicates that HIV and AIDS health initiatives in some countries have had a positive impact on the uptake of routine health services, such as antenatal care, family planning and tuberculosis treatment.[42] UNICEF, in conjunction with the US Agency for International Development and the UK Department for International Development, is embarking on a new initiative to determine how HIV-related programme scale-up can positively impact maternal and child health outcomes in countries highly affected by HIV.

A better understanding of paediatric treatment and the challenges hindering its full implementation underscores the need to eliminate transmission of HIV to young children

Over the last several years, there have been some notable advances in medicines for paediatric HIV care. By June 2009, there were 56 paediatric HIV antiretroviral medicines pre-qualified by WHO and available for procurement, a significant increase over the 42 medicines available just one year earlier.

Prices of first-line regimens have dropped considerably. The cost for treating a child with first-line generic medicines for one year is now only about US$50, or US$115–US$140 if syrups are used (although second-line treatment costs are still considerably higher). This represents a massive improvement from treatment costs that exceeded US$20,000 a year per child just a few years ago. Fixed-dose combinations are becoming more widely available, and a three-drug, fixed-dose combination that adheres to WHO recommendations is expected to be available soon.

A new study from the National Institutes of Health shows that first-line treatment regimens containing nevirapine, the medicine routinely used for several years to prevent mother-to-child transmission, may be less effective due to HIV drug resistance if used in infants previously exposed to single-dose nevirapine as part of PMTCT prophylactic regimens.[43] A child's resistance to nevirapine risks compromising simpler first-line regimens, necessitating the use of second-line regimens containing drugs that are costlier and may be more difficult to scale up due to their more complex storage requirements.

Another recent study involving a large southern Africa cohort showed that 89 per cent of children started on first-line treatment were still responding after three years. First-line treatment failure in the other 11 per cent was associated with particularly high pretreatment viral load levels, or more severe disease progression prior to the initiation of treatment, reinforcing the need to start treatment as early as possible.[44]

More work is needed to better understand the impact on women and children of changing PMTCT regimens – in terms of choice of regimen, side effects, drug costs and the costs associated with moving to alternate treatment regimens for children. These challenges underscore the need to redouble efforts to eliminate transmission of HIV to young children.

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There is much optimism that equity in access to HIV care and treatment is within our grasp

Children's overall access to HIV care and treatment has improved dramatically in the past five years, from a time when children exposed to or infected with HIV barely registered on the international care and treatment agenda to today, when the proportion of children in need of treatment who actually receive it is significantly more aligned with that of adults. Despite these impressive gains for children as a group, progress has not always been equitably distributed within or across countries.

Access to ART is lower among younger children living with HIV and children living in rural areas than among children living in cities.[45] Weak infrastructure and transportation systems, and generally higher levels of poverty, have inhibited achieving equity in these situations.

Yet all children have the right to essential health care, including life-saving HIV services. It is important to improve access to care for the most vulnerable and disadvantaged children, and initiatives in some countries are actively seeking to accomplish this. In the north-east of Brazil, which is largely poor, municipalities have accepted a challenge to improve a host of indicators on children's well-being, including some related to HIV and AIDS. As a result, many of the 1,130 participating municipalities have improved upon their indicators, with 259 even improving on all the indicators.

REMAINING CHALLENGES AND THE WAY FORWARD

With increasing coverage and uptake of PMTCT interventions, along with the use of more efficacious PMTCT regimens, the number of new infections in children can be expected to drop rapidly. Arguments will be presented that funds should be reallocated to other priorities; nevertheless, from a child rights perspective, it is important to reiterate that all children – even the most marginalized – have a right to survival. In the case of HIV, it is often the most marginalized who are most likely to remain at risk of HIV infection, even when paediatric infections are in decline.

Young people living with HIV have particular challenges related to treatment and adherence, and it is important to address safer sex behaviours as these young people grapple with their emerging sexuality. Health-care delivery for adolescents is often based on paediatric and adult-care models – without fitting neatly into either. Countries will be challenged to develop appropriate ways of caring for HIV-positive young adults; this will involve consulting these young people to ensure that the responses provided meet their needs.

Finally, a better understanding of the obstacles associated with scaling up paediatric HIV care and delivery in low- and middle-income settings is necessary to reach universal access goals. While governments and other partners have committed to making drugs and commodities more widely available, other obstacles – particularly those related to health systems – remain. Insufficient laboratory capacity, shortage of trained health-care workers, and weak infrastructure hamper the delivery of all health care, including HIV services. To ensure higher quality health-care delivery and associated reductions in morbidity and mortality, these systemic issues need to be addressed.

IV. PREVENTING INFECTION AMONG ADOLESCENTS AND YOUNG PEOPLE

The basis for effective prevention actions is a better understanding of local circumstances around the epidemic.

PROGRESS AND ACHIEVEMENTS

There has been significant improvement in comprehensive and correct knowledge about HIV and how to avoid transmission. The level of comprehensive knowledge among females aged 15–24 has increased by 10 percentage points or more in 17 out of 45 countries with survey-based trend data (1999–2008); such knowledge has increased in young men in 7 out of 12 countries with similar trend data (*Figure 7 and 8*). In several countries, there have been declines of 5 or more percentage points in such risky behaviour as the initiation of sex before age 15 of those 15–19 years old (in 7 countries for females and 7 for males), sex with multiple partners (in 2 countries for females and 11 for males) and sex without condoms (in 13 countries for females and 13 for males).[46]

Despite these positive trends, many young people continue to be infected with HIV. In 2007, an estimated 45 per cent of all new HIV cases in people aged 15 and older were found among young people aged 15–24.[47]

Overall, it is estimated that in 2008, a total of 4.9 million young people aged 15–24 were living with HIV in low- and middle-income countries. In all but two regions, there were also more young women than young men living with HIV (*Table 1*). Girls in sub-Saharan Africa are disproportionately vulnerable to HIV infection, particularly in the 'hyper-endemic' countries in southern Africa, where prevalence is greater than 15 per cent.

A clear understanding of adolescent sexual relations is necessary to shape and fine-tune prevention interventions

Analysis of survey data on HIV prevalence in eight countries shows that young women 15–24 years old who had their sexual debut when they were younger than 15 years old are more likely to be HIV-positive; the data were controlled for other behavioural and socio-demographic factors.[48] In most of these countries, HIV prevalence rates are also high

Table 1. Young people aged 15–24 living with HIV, 2008

Region	Female	Male	Total
Eastern and Southern Africa	2,000,000	850,000	2,900,000
West and Central Africa	770,000	320,000	1,100,000
South Asia	120,000	130,000	250,000
Latin America and the Caribbean	130,000	170,000	300,000
East Asia and the Pacific	120,000	93,000	210,000
CEE/CIS	41,000	29,000	70,000
Middle East and North Africa	45,000	44,000	89,000
Total	**3,230,000**	**1,640,000**	**4,900,000**

Note: The estimates are provided in rounded numbers but unrounded numbers were used in the calculations, thus there may be discrepancies between the totals.

Source: Unpublished estimates from Joint United Nations Programme on HIV/AIDS and World Health Organization, *2009 AIDS Epidemic Update*, UNAIDS and WHO, Geneva (forthcoming).

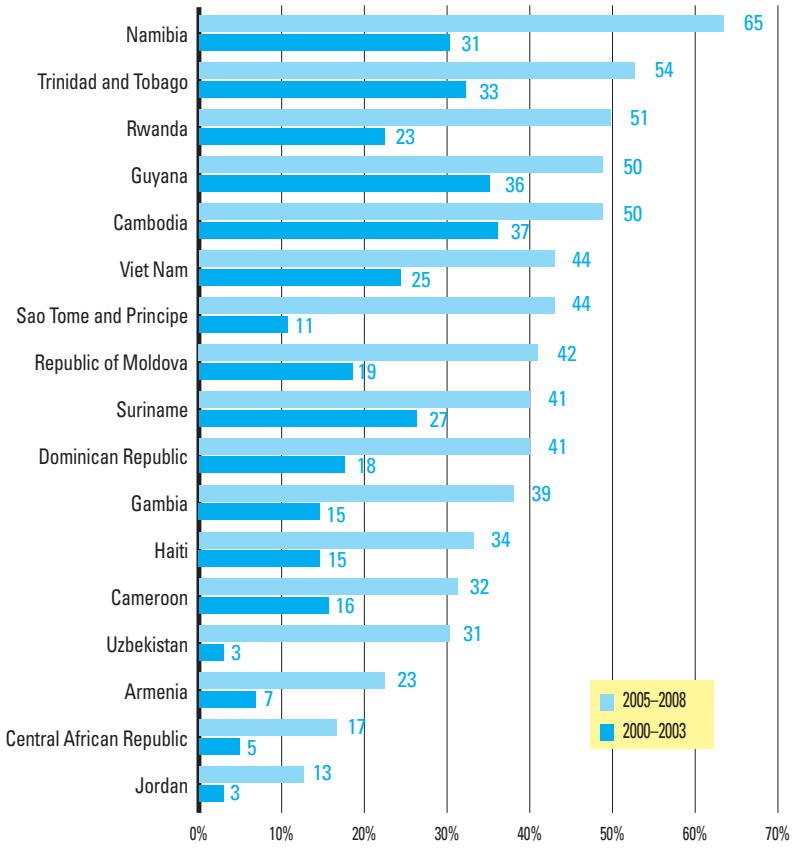
among women who first had intercourse between 15–18 years of age.[49] This underscores the importance of knowing the age of sexual debut to ensure that comprehensive prevention programmes reach adolescents beforehand.

In surveys in four countries, nearly one in four young women reported that their first sexual intercourse was forced.[50] There is a great deal of evidence that gender-based violence – particularly rape, forced sex, sexual violence, and sexual coercion and exploitation – is a serious risk factor for HIV.[51] This highlights the need to promote social change so that all forms of violence against girls become socially unacceptable, and to enact and enforce laws making them punishable as crimes. It entails questioning and challenging the social norms that persist in communities and engaging boys and men, and parents and families, in gender-transformative efforts.

An analysis of Demographic and Health Survey (DHS) and Multiple Indicator Cluster Survey (MICS) data from 36 countries indicates that fewer than one in four women aged 15–24 reported condom use at their last intercourse during the 12 months prior to the survey.[52] Among this population, condom use at last sexual intercourse with a higher-risk partner is low (32 per cent) and even lower with a non-higher-risk partner (6 per cent), although usage rates vary by country.[53]

Among young women who have had sexual intercourse, fewer than half say they could get a condom by themselves. There is a need to address the policy issues and cultural and religious factors and sensitivities surrounding condoms and young people. At the same time, local barriers to condom availability and use by both young men and women need to be removed, while continuing education on the benefits of condom use in reducing risk of HIV. Strong leadership by governments is essential to making this happen.

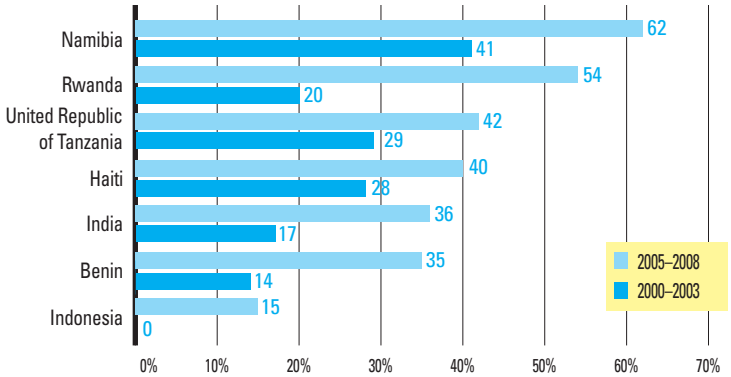
Figure 7. Percentage of young women aged 15–24 with comprehensive correct knowledge of HIV, in countries where such knowledge has increased by 10 percentage points or more (2000–2008)



Note: Data years are as follows: Dominican Republic (1999–2007); Armenia, Cambodia, Rwanda and Uzbekistan (2000–2005); Haiti (2000–2005/06); Cameroon, Central African Republic, Gambia, Guyana, Sao Tome and Principe, Suriname, Trinidad and Tobago and Viet Nam (2000–2006); Namibia (2000–2006/07); Republic of Moldova (2000–2008); Jordan (2002–2007). The data for the Republic of Moldova did not include one component of the indicator. The data for Jordan differ from the standard definition. For all countries reporting on this indicator, see Figures 13 and 14.

Source: DHS, MICS and Moldova National Representative Survey on Youth Knowledge, Attitudes and Practices regarding HIV/AIDS, 1999–2008.

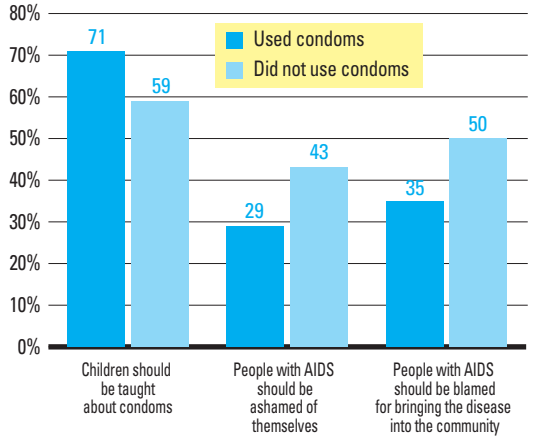
Figure 8. Percentage of young men aged 15–24 with comprehensive correct knowledge of HIV, in countries where such knowledge has increased by 10 percentage points or more (2000–2008)



Note: Data years are as follows: United Republic of Tanzania (1999–2007/08); Rwanda (2000–2005); Haiti (2000–2005/06); Namibia (2000–2006/07); India (2001–2005/06); Benin (2001–2006); Indonesia (2002/03–2007). The data for Indonesia differ from the standard definition. For all countries reporting on this indicator, see Figures 13 and 14.

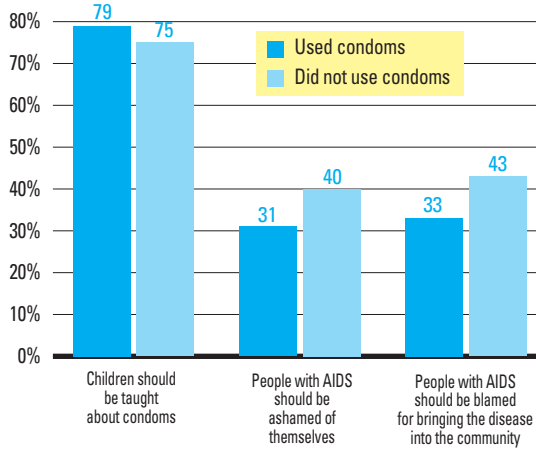
Source: Behavioural Surveillance Survey (BSS), DHS, National Family Survey (India) and Reproductive Health Surveys (RHS), 1999–2008.

Figure 9. Percentage of women aged 15–24 who used and did not use a condom, by attitude towards HIV infection in their communities (2001–2007)



Source: Preliminary analysis of DHS and MICS data (2001–2007) by UNICEF and ICF Macro, 2009.

Figure 10. Percentage of men aged 15–24 who used and did not use a condom, by attitude towards HIV infection in their communities (2001–2007)



Source: Preliminary analysis of DHS and MICS data (2001–2007) by UNICEF and ICF Macro, 2009.

The crux of a comprehensive approach to HIV prevention among young people is behaviour change, without which progress will be unsustainable

Extensive work over the course of many years has improved young people's knowledge of HIV and other sexual risks, and the evidence shows that comprehensive and correct knowledge has increased in many settings. There is a clear gap between knowledge of HIV risks and actual behaviour change, however, partly due to the contravening forces at play in cultural mores and sexual choices.

For example, prevention intervention trials in the United Republic of Tanzania and Zimbabwe focused on developing skills and changing attitudes among young people. Both interventions showed important progress in increasing and sustaining young people's knowledge, with some influence on reported sexual behaviour in the United Republic of Tanzania. The trials, however, did not demonstrate reduction in new HIV or other sexually transmitted infections.[54]

Analysis of DHS and MICS data found that young people aged 15–24 who live in communities where people think that children 12–14 years old should be taught about condoms are more likely to have used them (*Figures 9 and 10*). This analysis reinforces the important role of communities in influencing behavioural choices about condom use among young people. The survey data also found that young people are less likely to have used condoms in communities that mostly agree that people with AIDS should be blamed for bringing the disease into the community.

Some interventions have succeeded in changing behaviour. Recent evidence out of South Africa showed that a decrease in HIV prevalence among youth aged 15–24 (from 10.3 per cent in 2005 to 8.6 per cent in 2008) was likely attributable to a significant increase in condom use and the wide reach of HIV communication programmes among this age group.[55]

Other behaviours related to HIV, such as seeking an HIV test, can also change markedly. One experience in Uganda in 2008 used an SMS quiz to prompt mobile phone subscribers 17–45 years old to go for voluntary HIV testing and counselling at the local health centre. As an incentive, participants were offered free airtime, which could be traded like currency. The result was a 40 per cent increase in clients who came in for testing – from 1,000 to 1,400 during one six-week period.[56] It is too soon, however, to tell whether this new experience can be sustained and whether it will contribute to behaviour change, for example, in condom use, abstinence and partner reduction.

Studies from South Africa highlight the benefits of a multifaceted approach to the dual epidemics of gender-based violence and HIV.[57] The evidence has shown that multipronged interventions dealing with both gender-based violence and HIV risk, as well as income generation, can successfully reduce both violence and HIV risk.[58]

Countries are using better knowledge about the vulnerability of girls to inform policymaking and programmes

Knowledge of the disproportionate infection of young women in southern Africa has deepened during the last year. Yet, on

average, less than 30 per cent of the girls aged 15–17 in most countries of Eastern and Southern Africa were sexually active. One recent analysis of HIV-prevalence data disaggregated by age and sex found that HIV prevalence rates among girls aged 15–17 were low relative to rates among women aged 23–24 in a number of high-prevalence and 'hyper-epidemic' countries in Eastern and Southern Africa (Kenya, Malawi, Swaziland and Zimbabwe) and in Cameroon in Central Africa.[59]

In response to these findings, the Ministry of Education, Science and Technology in Malawi has embarked on an initiative with UN partners – UNICEF, the United Nations Population Fund (UNFPA), UNAIDS and the United Nations Educational, Scientific and Cultural Organization (UNESCO) – and civil society organizations, the Ministry of Women and Child Development, the Ministry of Youth Development and Sports and young people. Called Sisters to Sisters, the initiative focuses on empowering girls aged 15–17. It identifies older sisters as a credible source of reproductive health information and gives them a package of interventions called 'Life Skills Education PLUS' to use with younger girls. Social-change communication addresses the younger girls' families in order to create a more protective environment for them. The Sisters to Sisters model is being explored in Namibia and the United Republic of Tanzania, and is the basis of operational research currently under way in Botswana.

In most countries of West and Central Africa, HIV prevalence among adolescent girls ranges from 2 to 5 times greater than that of young men. In the Democratic Republic of the Congo, an integrated approach to HIV prevention, as well as the well-being, protection and empowerment of adolescent girls – with a focus on younger adolescent girls – is supported by UNICEF and partners in some provinces. The effort has shown promise by combining education, risk reduction, protection from violence and access to livelihood opportunities.

Education attainment and school attendance among young people 15–24 years old is highly correlated with HIV risk, particularly for young women. Pooled DHS data reveal that young women still attending primary, secondary or higher education have much lower rates of HIV than girls who have dropped out of school.[60] Recent studies from several countries describe various factors that lead to school dropout.[61] The overall data suggest that HIV prevention programming needs to pay closer attention to school attendance patterns and causes of dropout, with a specific focus on keeping girls in primary and secondary schools.

While school attendance in and of itself is a strong protective factor against HIV, effective school-based interventions can help raise HIV-related knowledge, attitudes and skills, contributing to overall behaviour change interventions. Such interventions can also respond to the additional needs of children infected and affected by HIV and AIDS. These two central objectives are outlined in a new publication by the UNAIDS Inter-agency Task Team (IATT) on Education titled *A Strategic Approach: HIV & AIDS and Education*.

A major barrier to effective HIV prevention in schools is the lack of evidence-informed national frameworks with specific application at the local level. The Botswana Ministry of Education and Skills Development has tackled this by developing a National Life Skills Framework in 2009 that focuses on the drivers of HIV in the country and related risk-reduction skills for adolescents. Based on the framework, revision of curricula and national student examinations is under way.

In Latin America and the Caribbean, a regional and intersectoral Executive Secretariat coordinated by the Ministries of Health and Public Education of Mexico is moving on the commitments in the Ministerial Declaration 'Prevention through Education' signed in 2008. The countries are establishing a shared evidence-based framework for comprehensive sexuality education to meet the needs of adolescents and young people. Mexico has organized an intersectoral committee in three regions on health, sex education and HIV and training for trainers on sexual and reproductive health. In 2008 the Ministry of Education of Nicaragua, with UNICEF support, introduced HIV education into the curricula of primary and secondary schools and into teacher training colleges in six areas of the country.

Interventions that engage young men and boys are necessary to reduce HIV incidence among both males and females

Efforts to promote involvement of boys and men in HIV prevention and issues of gender equality have gained traction in recent years. In 2009, a Global Symposium on Engaging Men and Boys in Gender Equality took place in Rio de Janeiro, hosted by an alliance of non-governmental organizations, including Promundo (Brazil), Instituto Papai (Brazil), White

Ribbon Campaign Canada, the MenEngage Alliance, Save the Children Sweden and the United Nations Population Fund. The symposium developed a call to action around engaging men and boys in reducing violence against women and girls, promoting sexual and reproductive health, and preventing transmission of HIV. Men and boys are also the focus of prevention efforts connected to forthcoming major sporting events (*see panel at right*).

In addition, male circumcision needs to be part of the overall prevention package for young men; uptake, however, continues to be inhibited by challenges and constraints faced by the 13 Eastern and Southern African priority countries where HIV prevalence rates are high and circumcision levels are low.[62] In Kenya, though, there are encouraging signs that scale-up may not be so far off. In November 2008, a comprehensive plan to circumcise men was launched in the western province of Nyanza, with more than 20,000 men circumcised in the first six months. Political commitment was key, as was the determination and involvement of young people who pushed for the intervention. In March 2009, the Ministry of Health in Botswana facilitated a consultative workshop for youth on male circumcision, where the young participants helped formulate a safe circumcision communication strategy.

There is growing discussion of infant circumcision, which is less risky than that of adolescents or adults. In optimal settings with well trained health-care personnel and adequate equipment, the procedure is relatively quick and safe, with lower complication rates than among adults.[63] The impact of infant circumcision on HIV prevalence, however, will only be felt in 15 to 20 years, when these infants become sexually active young men.

Using sports to reach men and boys with prevention messages

The Africa Cup of Nations, to be held in Angola in January 2010, is a vehicle for prevention messaging that aims to motivate men in the region to affirm their roles in responsible sexual behaviour. In another example, during the FIFA World Cup slated for June–July 2010 in South Africa, the national Brothers for Life campaign will showcase men who have healthy sexual behaviour as role models for other men, and will feature football players and celebrities in the communication part of the campaign.

The AIDS epidemic will not be halted until prevention services reach at-risk and marginalized groups as a priority, without discrimination

A human rights-based approach to prevention involves adolescents and young people, including those who are most at risk and particularly vulnerable to infection. Yet the collection and analysis of disaggregated data by age, sex and other characteristics necessary to understand what is happening with these populations are still not consistently carried out.

There are some exceptions. An ongoing seven-country project in Central and Eastern Europe, conducted in partnership with the London School of Hygiene & Tropical Medicine and UNICEF, has begun providing detailed evidence on adolescents' risk-taking behaviours and access to harm-reduction services; its results are beginning to influence policy and practice in the region. Findings show that adolescents who are most at risk are not a priority in places where HIV prevalence is low. Reasons include limited resources, political uncertainty and low capacity.[64]

Representatives from Bolivia, Brazil, Colombia and Peru convened in Lima in September 2008 to make recommendations for responding to the vulnerability to HIV of young people living and working on the streets. In Afghanistan, as elsewhere, sexual exploitation and abuse of highly vulnerable adolescent males, as well as consensual male-to-male sex, exist at significant levels but are largely unrecognized.[65] Stakeholders have rallied to address these issues. In Iran, an assessment of adolescent-friendly services integrated within the regular health network has shown the need to remodel such services to focus more on vulnerable young people and those most at risk for HIV.

Children and young people are also particularly vulnerable during emergencies. Following new Inter-Agency Standing Committee (IASC) Guidelines on HIV in Humanitarian Settings, tools were established for mainstreaming HIV in education in emergency settings.

From a child rights perspective, the lives and health of adolescents and young people living with HIV and AIDS cannot be neglected

The number of young people living with HIV and AIDS who were infected perinatally and who survive to adulthood is on the rise, as the life-prolonging effects of ART improve with better regimens and greater access to treatment. Due to increased access to testing, more young people now know they are living with HIV; yet most of their families and communities are ill-prepared to support them. WHO is currently completing a module on adolescents living with HIV to incorporate into IMAI training.

Research conducted at a number of HIV care and support centres in Uganda revealed that only about one third of 15–19 year olds had ever talked to their parents or guardians about their sexual and reproductive health needs.[66] This led to the design of specific interventions for parents raising adolescents who were infected with HIV perinatally, and to a renewed focus on these young people's prevention needs.

In Haiti, young girls and boys aged 13–19 who are infected with HIV or at high risk of becoming infected receive quality specialized care, prevention and treatment in a youth-friendly clinic. In the clinic's first year, these adolescents' adherence to treatment increased from 12 per cent to 70 per cent.[67] In Rwanda, innovative approaches to disclosure and psychosocial support are being scaled up; young people accompanied by parents and guardians are informed of their status in groups and are encouraged to participate in follow-up support sessions.

REMAINING CHALLENGES AND THE WAY FORWARD

Gains are being made in the collection and use of age- and sex-disaggregated data to identify young people who are most likely to become infected with HIV and to design prevention programmes with them that address local contexts. Such programmes include interventions focusing on sexual risk among girls 15–17 years old in Botswana and other 'hyper-endemic' countries, and on harm reduction among young men injecting drugs in Ukraine and other countries with concentrated epidemics. Implementation of youth-oriented interventions tailored to local settings, however, is still the exception.

Operational research needs to go hand in hand with scaling up prevention interventions and services. Links between prevention and treatment need to be strengthened; for example, voluntary counselling and testing may provide the necessary link to outreach and peer education services, or for male circumcision. Particular attention is also needed to create empowering environments that promote young people's accurate self-assessment of risk and their motivation to reduce risk behaviour.

There are now many young people living with HIV who are making decisions about sex. Supporting them means working to integrate services for HIV-positive young people through the use of adolescent sexual and reproductive health interventions – an ongoing challenge. Emerging perspectives that place young people living with HIV at the centre of prevention efforts, through an integrated focus on promoting 'positive health, dignity and prevention', need to be expanded.

Prevention efforts for young people must be an essential part of national prevention strategies and they must be funded. Local drivers of the epidemic (sexual patterns, gender dynamics and violence) among young males and females must be better reflected in combination prevention programmes. Risk-reduction strategies must be applied within a broader push to address the societal norms that engender risk.

WHO is leading a global shift in thinking that sees a greater contribution of treatment to prevention outcomes. One mathematical model suggests that in a severe epidemic such as in southern Africa, were it possible to ensure voluntary HIV testing on an annual basis for all followed by immediate ART for those infected, HIV incidence could be reduced by 95 per cent within a decade and prevalence could be reduced to below 1 per cent in 50 years. There would be cost savings compared with current treatment scenarios after about 25 years.[68]

Finally, young people are important partners in finding solutions to the problems that concern them. Young people's participation not only builds ownership of programmes, but capacity as well. The participation of young people, and their 'buy-in', is crucial for improved prevention outcomes.

V. PROTECTION, CARE AND SUPPORT FOR CHILDREN AFFECTED BY HIV AND AIDS

Strengthening social protection in times of economic hardship is necessary to support families and communities in caring for children affected by AIDS.

PROGRESS AND ACHIEVEMENTS

There is growing international support for social protection approaches that are both child-sensitive and AIDS-sensitive. In October 2008, in Dublin, the Global Partners Forum for Children Affected by HIV and AIDS resulted in an unprecedented consensus on the factors that adversely influence child well-being within the context of HIV and AIDS. In addition, recent high-level research has enhanced the understanding of childhood vulnerability and documented the most appropriate responses for children affected by HIV and AIDS.[69] Child-sensitive and AIDS-sensitive social protection have been shown to have positive impacts on the well-being of these children.

Scaling up support for children affected by AIDS remains an urgent priority. The UNGASS and *Unite for Children, Unite against AIDS* target for the proportion of households with orphans and vulnerable children (OVC) receiving free, basic external support is 80 per cent. Yet it was reported in *Children and AIDS: Third Stocktaking Report* that very few households caring for these children were receiving basic external support: a median of 12 per cent.

Vulnerability analyses of the last few years have shown that orphanhood affects vulnerability, but not in all cases. There are many factors that can influence vulnerability, including household wealth and the education levels of adults. In communities where HIV and AIDS intersect with extreme poverty, conflict and high ratios of dependents in a household, helping all vulnerable children is a cost-effective and non-stigmatizing strategy.

MAIN ISSUES

Child-sensitive social protection is a key intervention to reaching children affected by AIDS

Poverty is a key factor negatively affecting children's well-being. It increases the impact of AIDS on children by reducing households' ability to cope with additional stress. The current economic crisis, if prolonged, is likely to worsen such outcomes unless efforts are undertaken to mitigate its impact.

AIDS places an increased economic burden on households needing to pay for drugs and funerals, putting particular pressure on women and girls caring for AIDS patients. Children may have to drop out of school. In communities affected by poverty and AIDS, the effects of the epidemic are compounded by a weakening capacity of families and communities to care for and support children.

The October 2008 communiqué issued by the Global Partners Forum and agreed by a range of development partners highlights social protection as one of the key actions to accelerate support for children affected by HIV and AIDS. It calls for partners to support the development and implementation of comprehensive national social protection programmes.[70] This recommendation is grounded in a growing base of evidence showing the positive impact of social protection for children and households in AIDS-affected communities.

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Broadly, child-sensitive social protection encompasses social transfers (including cash and in-kind transfers and vouchers), social insurance, social services (including social welfare services such as legal support, social work and alternative-care services), and social policies and legislation designed to benefit children, including those affected by HIV and AIDS. This holistic approach can increase the effectiveness of investments in health, education and water and sanitation, as part of an essential package of services for families, and it can reach children outside the family environment. Child-sensitive social protection involves state and non-state actors; in many resource-limited countries, civil society organizations – including faith-based organizations – have a key role to play in delivering key services.

A paper by the Joint Learning Initiative on Children and HIV/AIDS suggests that cash transfers to poor families affected by AIDS have the potential to improve nutrition, thereby slowing the progression of AIDS and improving the effectiveness of ART. The paper also documents the impact of cash transfers in South Africa on child nutrition, showing that the child support grant resulted in increased child height, especially in cases where it was received when children were younger.[71]

The most vulnerable households, including those affected by AIDS, face barriers in accessing essential services for a number of reasons. Services may be poorly targeted or limited in coverage, and families may lack the civil registration documents needed to access services or be unable to afford the high incidental costs associated with seeking and obtaining them. As part of a broad package of social protection, family assistance and child welfare services can ensure that AIDS-affected children are identified and supported in accessing health, education and other essential services.

A growing number of social protection programmes are already delivering at scale to children affected by HIV and AIDS, often through government-led initiatives. Ghana's Livelihood Empowerment Against Poverty (LEAP) programme started in 2006–2007 as a pilot cash grant for guardians and caregivers of orphaned children; it has been expanded and is now part of the national Poverty Reduction Strategy. LEAP requires recipient households to comply with certain conditions: keeping children in school, registering with the National Health Insurance Scheme, bringing babies in for regular check-ups and keeping their immunizations up to date, and not subjecting children to the worst forms of child labour. Like many other cash transfer programmes provided through households, LEAP benefits not only caregivers of OVC but also elderly women and young girls who are disproportionately affected by the burden of caring for the chronically ill.

In Malawi, the National Action Plan for Orphans and Vulnerable Children (2004–2009) outlines programmes and includes guidance for the establishment of meaningful social protection interventions, and the Malawi Growth and Development Strategy has social protection as a key theme. The latter includes the design, implementation and evaluation of a social cash-transfer scheme linked to schools and childcare centres that seeks to reduce poverty and hunger in ultra-poor households. The pilot scheme is being administered in seven districts. As of April 2009, it had reached more than 23,000 households and 92,000 individual beneficiaries – of

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whom, more than 48,000 were OVC. It has achieved substantial results in terms of health, education, asset accumulation and child protection in beneficiary households.[72]

In China, evidence that AIDS-affected families were living on less than half the total income of unaffected households was used to advocate for the country's 'Four Frees, One Care' AIDS policy and led to the introduction of small grants, vocational and animal husbandry training, and other assistance to women living with HIV. From 2006 to 2008, per capita annual income of HIV-affected families in a demonstration county increased by 38 per cent, compared with only a 20 per cent increase in a control group.[73]

The African Union (AU) and the Southern African Development Community (SADC) have increasingly shown their commitment to vulnerable and AIDS-affected children. In October 2008, AU ministers in charge of social development adopted a Social Policy Framework for Africa that recommends scaling up social protection, including income transfers, to mitigate the economic and social impacts of the AIDS epidemic on children and other vulnerable groups. SADC recently finalized its Strategic Framework on Orphans, Vulnerable Children and Youth, which provides a framework for the development of a minimum package of social protection services, including psychosocial support services, that can be taken to scale.

Investment in social systems is needed to scale up support for vulnerable children affected by AIDS

Just as PMTCT and paediatric treatment require stronger and more integrated health systems, social welfare systems need to be strengthened to reach more children affected by AIDS with care, protection and support. Scaling up a comprehensive social protection package that is child-sensitive and AIDS-sensitive entails a substantial response from agencies responsible for child protection, an effort usually managed by social welfare ministries. Momentum in social protection, particularly around cash transfers, has paradoxically shed light on the limited capacity of social welfare institutions to deliver assistance to children and families and has provided a crucial opportunity to improve these systems.

At the global level, UNICEF is leading efforts to promote a conceptual understanding of a systems approach to child protection and to develop standardized tools to map national child-protection systems. At the national level, a number of countries highly affected by AIDS are already identifying some of the weaknesses specific to their social welfare institutions and are working to overcome them.

In Namibia, the Ministry of Gender Equality and Child Welfare coordinates the National Plan of Action for OVC (2006–2010). A key target of the plan is that 50 per cent of all registered OVC receive some form of external support (economic, home-based care, psychosocial and educational) by 2010. Social welfare grants increased significantly in 2007–2008, but the additional burden placed on social workers administering the grants prompted the Directorate of Child Welfare, which falls under the Ministry, to carry out a human resources and capacity gap analysis in 2008. This analysis prompted an approval by the Public Service Commission and the Prime Minister to increase the number of social workers by 125 per cent.[74]

Malawi has undertaken an analysis of human resources capacity within the Ministry of Women and Child Development and developed a plan of action for this Ministry, which is now engaging in organizational reflection and system improvement.

Weak social welfare sectors contribute to poor management of alternative care for children affected by AIDS

Families and communities are often best placed to protect the well-being of children who have lost one or both parents to AIDS. In sub-Saharan Africa, informal child fostering (kinship care) within family networks is widespread. In Zimbabwe, for example, most children who have lost one or both parents are living with a surviving parent, a grandparent or other relatives.[75]

In Kenya, cash transfers have enabled vulnerable children to stay with the caregivers they know and love, and have prevented many children in extremely poor households from ending up on the street or in orphanages. The national Cash Transfer Programme for Orphans and Vulnerable Children, which covered 12,500 households at the end of 2007, was slated to reach 70,000 households by the end of 2009, a development that brought a commensurate increase in Kenyan Government contributions. The World Bank has approved US$50 million to further scale up the programme, whose goal is to reach 100,000 households by 2012.[76]

Estimates put the number of children living in institutional settings globally at more than 2 million,[77] and a UNICEF review conducted in 2007–2008 found that, in several countries, the number of institutions housing children is rising.[78] But even in countries highly affected by AIDS, the overwhelming majority of children in institutional care have a surviving parent or other close relatives,[79] and it is usually poverty, rather than lack of familial support, that fuels the demand for orphanages. This suggests that more investment is needed to provide economic support to AIDS-affected households to combat the factors that drive children into institutional care.

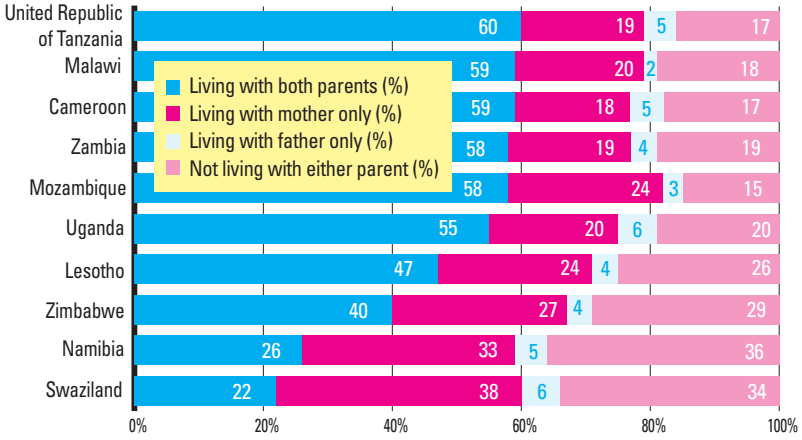
Many countries advocate for family care, with residential care as a last resort. Some countries in Eastern and Southern Africa have standards for residential care. But the UNICEF review also found that standards and regulations in this region are generally weak.[80] Child placements depend on social workers, whose time is often limited, and on functioning judiciary systems. Standards entail a capacity for oversight, inspection and monitoring that may not exist. Weak implementation is often a result of insufficient staff capacity and a lack of resources.

Many countries are strengthening policy and legislation in order to help children stay in families and to provide family-based alternative care to children outside of families. The Children's Act in South Africa has been amended to improve social-services systems for children, while similar changes have been made to the latest draft of the Child Care and Protection Bill in Namibia. As part of the Care Reform Initiative (2006–2011), Ghana updated its Regulations and Standards for the Operation of Residential Care Settings, with the goal of making institutional care a last-resort option and ensuring that the orphanages that do exist have adequate resources to remain credible out-of-home care options.

In Malaysia, new guidelines provide a framework of care and protection for children – including those affected by HIV and AIDS – in care homes run by non-governmental organizations. In Guyana, support from HIV/AIDS funding enabled the Ministry of Labour, Human Services and Social Security to launch the Minimum Operational Standards and Regulations for Children's Homes in 2008.

The Better Care Network facilitates information exchange and collaboration among the growing number of organizations, faith-based groups, governments and individuals concerned about children without adequate family care. Within the network, the Faith to Action Initiative provides information and resources to US Christian churches and faith-based

Figure 11. Percentage of children under 18 years old by living arrangements, in countries with HIV prevalence of 5 per cent or more, 2004–2008



Note: Respective data years: Mozambique, 2008; United Republic of Tanzania, 2007–2008; Zambia, 2007; Namibia and Swaziland, 2006–2007; Cameroon, Malawi and Uganda, 2006; Zimbabwe, 2005–2006; Lesotho, 2004. Country totals may not add up to 100 per cent because of rounding.

Source: DHS and MICS, 2004–2008.

organizations seeking to address the needs of OVC in sub-Saharan Africa. It advocates support for family and community-based approaches, as opposed to building orphanages as a first response.

Community- and faith-based organizations have an important role in delivering, coordinating and monitoring services for children in communities affected by AIDS

The proliferation of local initiatives for children affected by HIV and AIDS in recent years is an example of the ability of community- and faith-based organizations to quickly mobilize around important community concerns. In a six-country study of nearly 700 faith-based organizations supporting children, one half had been established in the preceding four years.[81]

New challenges, however, have arisen. Much of child-sensitive social protection is provided through non-governmental and community-based organizations, which often face difficulties delivering at scale and ensuring referral to other government or private providers. These local efforts often do not form part of a national strategy, plan or monitoring system and go largely unrecognized, resulting in limited access to resources for households in need. It is necessary to link these community-based efforts to broader national frameworks and to establish strategic partnerships between governments and community-based organizations so that interventions can be coordinated based on comparative advantages and responsibilities.

Some countries building on strategic partnerships are obtaining concrete results and reaching increasing numbers of vulnerable children. Efforts such as the Church Alliance for Orphans in Namibia and the Buddhist Leadership Initiative in Viet Nam have been well documented. Uganda has also made great strides mobilizing community- and faith-based organizations to work with government statutory agencies at the sub-county level as part of a functioning child protection system.

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REMAINING CHALLENGES AND THE WAY FORWARD

Many challenges to scaling up care, protection and support for children affected by AIDS remain. Combining the various aspects of a social protection package requires reinforcing the capacity of institutions to deliver essential services. Ensuring that the most vulnerable households in AIDS-affected communities access cash transfers and other child services requires human resource capacity in the social welfare sector, either in government or in civil society organizations. Capacity is particularly needed within communities to address barriers to the implementation of social protection schemes, including identification, targeting, delivery of transfers, and AIDS-related stigma and discrimination, whether real or perceived.

There is a need to evaluate and share lessons on how to implement and scale up protection, particularly in resource-poor but highly AIDS-affected contexts. Longitudinal multi-country studies that identify and address implementation challenges related to targeting, institutional delivery options, affordability and sustainability are still required.

VI. PROGRAMME MONITORING AND EVALUATION

Monitoring and evaluating programmes on HIV and AIDS is critical to providing evidence for what works and where to make improvements.

PROGRESS AND ACHIEVEMENTS

Monitoring and evaluation (M&E) is crucial for tracking progress towards HIV and AIDS commitments and goals. At the global level, great strides have been made in the past year towards strengthening M&E capacity in all four priority areas of the *Unite for Children, Unite against AIDS* campaign.

UNAIDS, through the HIV/AIDS Monitoring and Evaluation Reference Group, has coordinated the development of 40 core monitoring indicators for use at national levels. They consist of the 25 indicators for monitoring targets set at the 2001 UNGASS, plus 15 additional recommended indicators.[82]

UNICEF publishes *Children and AIDS: Country Fact Sheets* annually as a companion to the *Stocktaking Reports*. The data presented in these fact sheets are useful for monitoring progress on the four 'Ps' and how countries and partners are fulfilling UNGASS and other global commitments.

MAIN ISSUES

The implementation of the third of the 'Three Ones' – one national M&E framework – is a tremendous challenge at country level because of the many actors involved, with monitoring requirements sometimes not integrated into the national M&E system. Evidence of how M&E systems and data are influencing decision-making around the four 'Ps' at country level is limited.

Furthermore, development of national routine programme-monitoring systems, particularly those related to OVC and young people, remains weak, as does development of links between facility-based and community-based M&E activities.

There are technical difficulties in estimating population sizes to inform programme planning and implementation and assist in tracking progress in coverage of different interventions. Data that are disaggregated by age, sex and other characteristics are limited, complicating efforts to track equitable access to services and uptake.

Finally, the 'E' in M&E needs more attention. There is a dearth of evaluation information that can be used to assess the impact of HIV and AIDS interventions on desired outcomes for women and children. It is necessary to prioritize research on impact evaluation, to assess the cost of HIV programmes and to conduct operational research to identify successful implementation strategies.

Monitoring and evaluation of PMTCT and paediatric HIV programmes must keep pace with advances in evidence and programming

Many countries have expanded and strengthened PMTCT and paediatric HIV programmes in accordance with the latest guidance, including WHO guidelines on ARV drugs for treating pregnant women and preventing HIV infection in infants and the guidance on global scale-up of PMTCT. But M&E must also be updated and made consistent with such guidelines. In 2009, the M&E Working Group of the Inter-agency Task Team on PMTCT, co-facilitated by UNICEF and WHO, updated guidance on monitoring and evaluation of HIV prevention among pregnant women, mothers and children, taking into account the latest international programme recommendations for PMTCT and paediatric HIV care and treatment (*Table 2*).

Many low- and middle-income countries have established national databases on PMTCT and paediatric HIV coverage and are able to report on these data annually. Since 2006, more than 100 countries have consistently reported on data on PMTCT and paediatric HIV care and treatment, up from 58 countries in 2004 and 71 in 2005 (*Figure 12*).

The range, completeness, and reliability of the data reported, however, remain limited and are not always adequate for decision-making. Data for newer indicators – early infant diagnosis, cotrimoxazole prophylaxis, CD4 assessment of HIV-positive pregnant women for ART eligibility, infant feeding practices and the unmet need for family planning – are less reported by countries. Age-disaggregated data for paediatric ART and disaggregated data on ARV regimens for PMTCT are both important inputs for generating estimates of need and coverage, but these too are less available.

In 2009, UNICEF, WHO and UNAIDS merged the WHO Universal Access reporting tool with the PMTCT and paediatric HIV report card. There is now one joint monitoring and reporting form as a way to harmonize data collection and minimize the reporting burden on countries.

The latest report of *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector*, issued in September 2009 by WHO, UNAIDS and UNICEF, is based on country reporting data that makes use of the joint tool. The publication presents the most comprehensive set of data available on the health sector efforts of low- and middle-income countries in response to HIV and AIDS, and is intended to help keep track of how national commitments regarding increased coverage and uptake are being translated into national action.

In 2009, WHO, the US Government, UNICEF and partners developed forms for monitoring HIV in patients that integrate HIV care and ART, maternal and child health and PMTCT, and tuberculosis and HIV, thereby providing a minimum standard set of HIV data. The forms can be adapted by countries to existing patient cards, registers and summary reporting forms.

UNICEF, WHO and UNAIDS, in collaboration with Vanderbilt University, also hosted an expert consultation, which made suggestions on possible indicators for assessing the

Table 2. Summary of recommended national indicators for monitoring and evaluation of PMTCT and paediatric HIV care and treatment

Core indicators	
1.	Existence of national policies and guidelines consistent with international standards for the prevention of mother-to-child transmission.
2.	Percentage of health facilities that provide antenatal care services with both HIV testing and ARV for the prevention of mother-to-child transmission on site.
3.	Percentage of pregnant women who were tested for HIV and know their results.
4.	Percentage of HIV-positive pregnant women who were assessed for ART eligibility.
5.	Percentage of HIV-positive pregnant women who received ARV to reduce the risk of mother-to-child transmission.
6.	Percentage of infants born to HIV-positive women (HIV-exposed infants) receiving ARV prophylaxis to reduce the risk of mother-to-child transmission (by regimen: single- or multi-drug).
7.	Percentage of infants born to HIV-positive pregnant women who are started on cotrimoxazole prophylaxis within two months of birth.
8.	Percentage of infants born to HIV-positive women who received an HIV test within 12 months of birth.
9.	Percentage of HIV-exposed infants who are exclusively being breastfed, replacement fed or mixed fed at 3 months.
10.	Percentage of HIV-positive women of reproductive age receiving HIV care and treatment services with unmet need for family planning services.
11.	Percentage of infected infants born to HIV-positive women.
12.	Percentage of HIV-positive children aged 0–14 who are currently receiving ART.
Additional indicators	
13.	Percentage of districts that have CD4 testing services available.
14.	Percentage of health facilities that provide viral testing services for infant diagnosis, on site or through dried blood spots (DBS).
15.	Percentage of male partners of pregnant antenatal care clients who were tested for HIV.
16.	Percentage of HIV service-delivery points prepared (with stocks and trained provider) to provide at least three family planning methods.

Source: WHO, UNICEF and IATT on PMTCT Monitoring and Evaluation, 'Monitoring and Evaluating Prevention of Mother-to-Child Transmission of HIV: A guide for national programmes' (draft, 2009).

impact of PMTCT programmes, including HIV-free survival at 18–24 months (which takes into account transmission through breastfeeding, risks of replacement feeding and other mortality factors).

Efforts to capture prevention data at the community level are still weak

M&E of HIV prevention interventions is challenging because most activities are conducted through community-based mechanisms – mass-media campaigns and education – making it difficult to determine who is reached and what the impact is. Data on sexual behavior and knowledge about HIV prevention among young people, while increasingly available, are still limited, particularly for those young people who are most at risk. DHS and MICS are not designed to collect data in these populations.

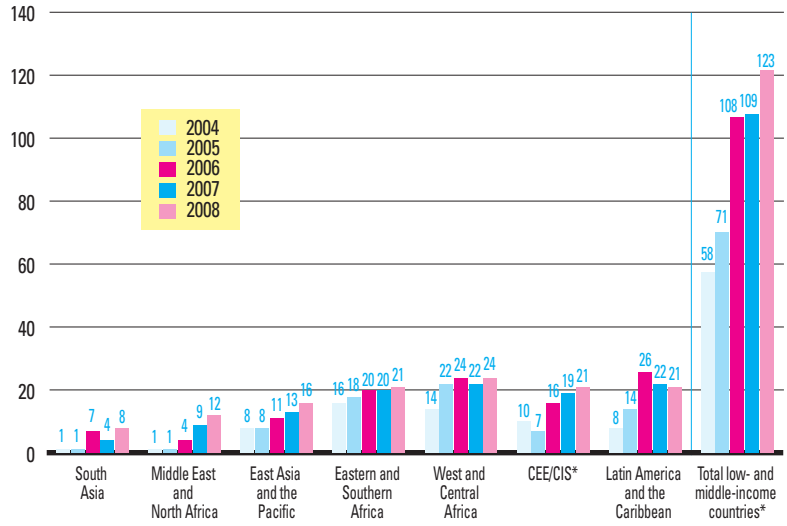
Since 2008, through the efforts of the M&E working groups at UNAIDS and the IATT on young people, significant progress has been made in harmonizing and coordinating the M&E of HIV prevention among young people at the global level. However, similar efforts at regional and country levels are still weak.

Protection M&E indicators are in need of revision

The indicators initially set out by UNGASS to measure children affected by AIDS include the ratio of school attendance between orphans and non-orphans aged 10–14 and the percentage of orphaned and vulnerable children under 18 whose households received free, basic external support in caring for the child.

The first indicator, on school attendance, was developed based on an assumption that orphans are less likely to attend school than non-orphans. An analysis of the most recent round of MICS and DHS data, however, shows that being an orphan (whether having lost one or both parents) or having a chronically ill or HIV-positive adult in the household does not consistently identify children with the worst health, education or protection outcomes.

Figure 12. Number of low- and middle-income countries reporting on key data on PMTCT and paediatric HIV care and treatment, 2004–2008



*** Includes high-income countries:** Hungary, Latvia and Poland in 2007 count; and Hungary, Latvia, Lithuania, Poland and Slovakia in 2008 count.

Source: UNICEF global databases, 2009.

More consistent markers of vulnerability are household wealth status, living arrangements and the education levels of adults in the household[83] – a finding that has thrown into question the usefulness of the current global indicators. The IATT M&E working group on children affected by AIDS, co-facilitated by UNICEF, PEPFAR and Save the Children Fund, is actively involved in discussions about redefining vulnerability and identifying ways to measure the coverage of services for children in the context of HIV and AIDS.

The second indicator, on the percentage of orphaned and vulnerable children under 18 whose households received free, basic external support, has been difficult to interpret in terms of benefit or outcome due to lack of clarity and agreement on how to define a vulnerable child, and on what a minimum package of services entails, how often it should be delivered, and how it should be counted. It is still widely recognized, however, that there is a need to measure global coverage of support – namely, social protection – in order to assess progress and identify gaps in the response.

In an attempt to overcome the gaps in monitoring children outside family care, the Better Care Network and UNICEF in 2009 finalized and disseminated a manual on the measurement of indicators for children in residential care, which includes 15 quantitative and policy/implementation indicators.[84]

The implications of the shift from AIDS-exclusive to AIDS-sensitive programming are still unclear in terms of monitoring and evaluation of these efforts. The challenge will be to adapt indicators, measurements and monitoring systems to this new direction.

Figure 13. The 87 countries with recent data available on comprehensive knowledge of HIV among young women aged 15–24, 2003–2008

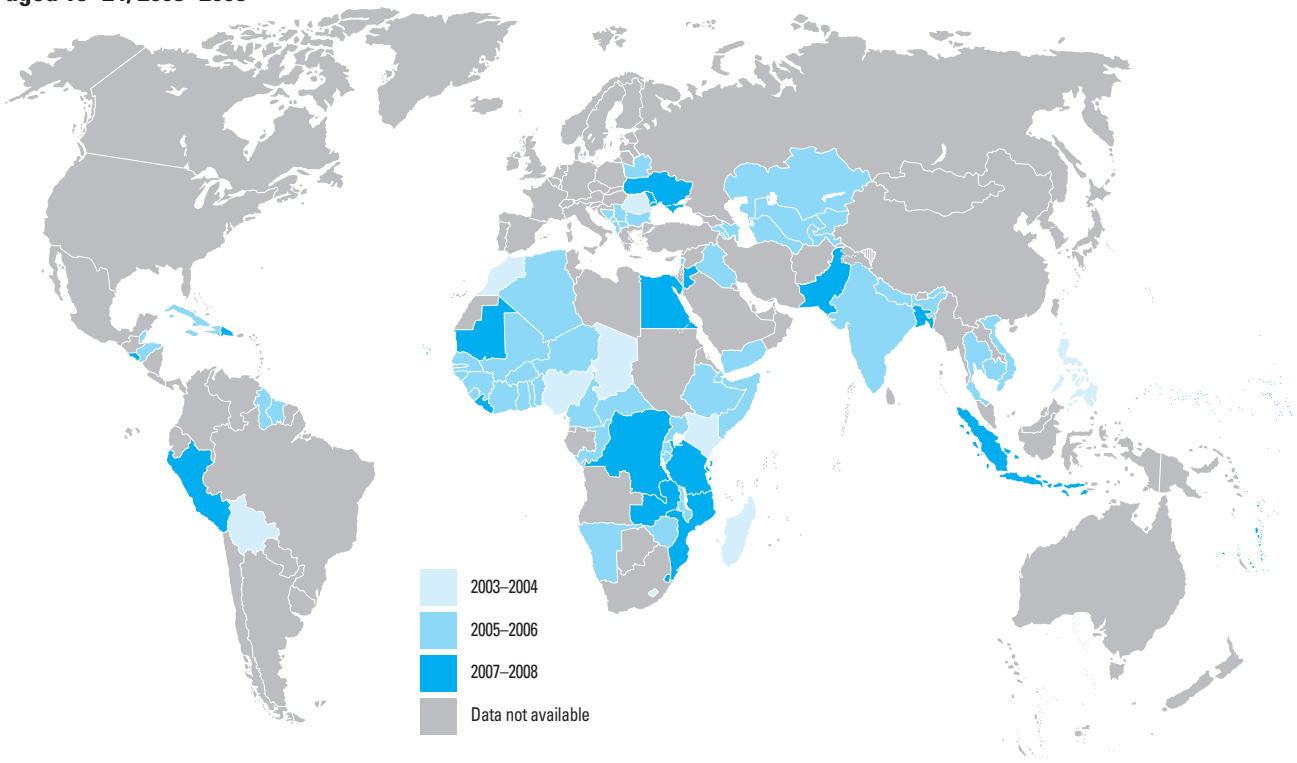
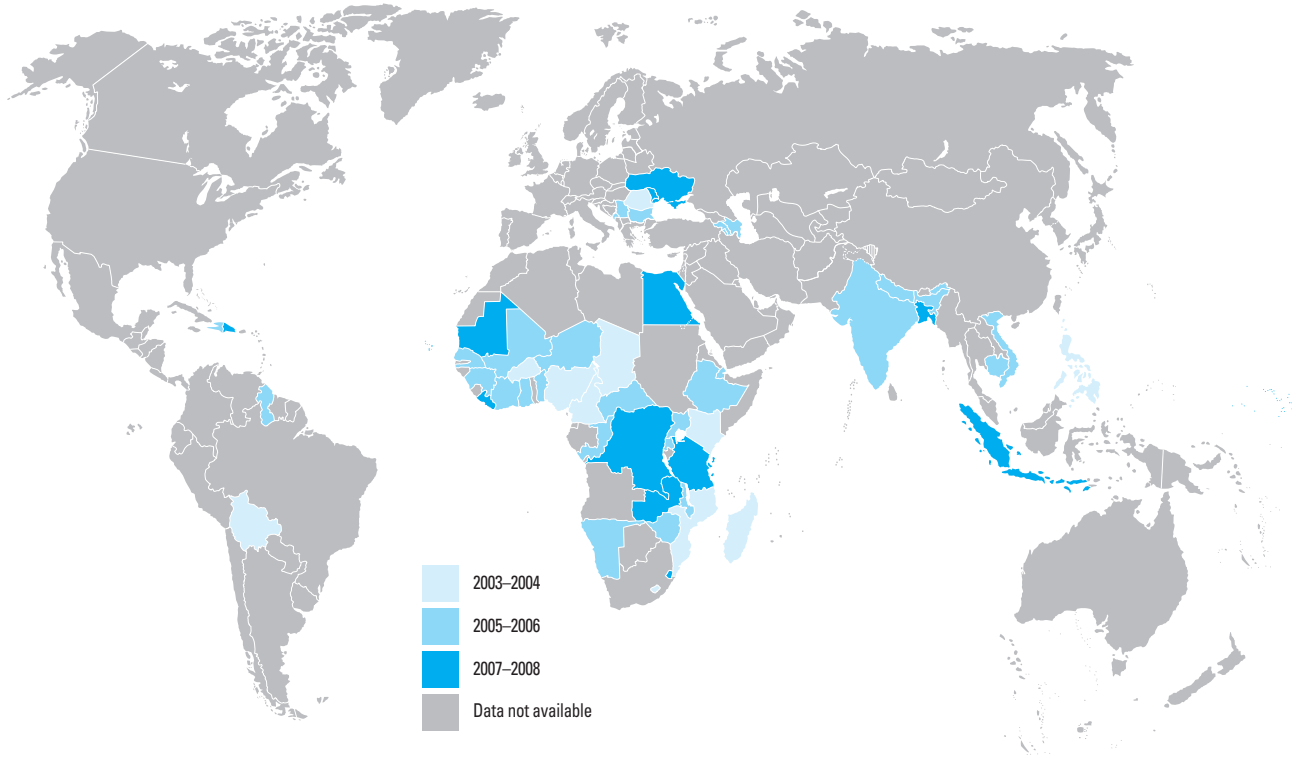


Figure 14. The 51 countries with recent data available on comprehensive knowledge of HIV among young men aged 15–24, 2003–2008



Notes: 'Comprehensive knowledge' is defined as correctly identifying 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.

The low- and middle-income countries included in the analysis are only those that have a UNICEF presence. Data refer to any data collected using DHS and MICS during the period 2003–2008.

These maps are stylized and not to scale. They do not reflect a position by UNICEF on the legal status of any country or territory or the delimitation of any frontiers. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNICEF global databases, 2009.

Monitoring and evaluation: Summary of remaining challenges

- Difficulty in estimating population size and HIV prevalence among the 'hard-to-reach', hidden, marginalized, mobile and migrant populations, and in generating reliable HIV estimates on the overall need for care and treatment.
- Variations in indicator definitions and data collection methodologies, which negate data comparability within and across countries.
- Lack of measurable, standard definitions of children affected by AIDS and of vulnerable children; no consensus on a definition of what constitutes a standard package of services for children affected by HIV and AIDS.
- Lack of baseline data on vulnerable children – the denominator – in most countries due to the lack of a standard definition.
- Limited reliable data on children outside households and family care (e.g., children living on the streets and in institutions) who are not identified in household surveys.
- Potential of double-counting due to multiple interventions for orphans and vulnerable children.
- Difficulty in defining which outcomes to measure for OVC and how to attribute outcomes to interventions.
- Limited disaggregated data on sex, age and other characteristics for subpopulations most at risk, particularly young people engaged in injecting drug use, sex between males and selling sex.
- The complexity of comprehensive prevention and impossibility of isolating one or several factors in averting infection.
- Lack of comparable evidence on the impact of PMTCT programmes on HIV infections averted in infants and children and HIV-free survival.
- Ethical issues in gathering data, particularly sensitive data, from children, including the concern that data collection and M&E activities related to vulnerable children not increase their vulnerability.
- Limited range, completeness, reliability and quality of data collected and reported.
- Weak coordination and harmonization of M&E efforts at regional and country levels.

VII. INVESTMENT: WHAT WOMEN AND CHILDREN NEED

"A mother should not have to choose between continuing AIDS treatment and feeding her children." – Michel Sidibé, UNAIDS Executive Director[85]

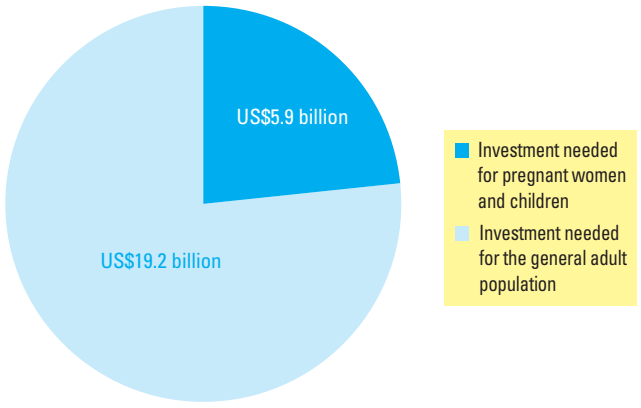
Since the launching of *Unite for Children, Unite against AIDS* in 2005, substantial progress has been made in delivering HIV services to millions of people, particularly to women, children and young people. Resources to meet these challenges have also increased: The US$13.7 billion investment in HIV programming in 2008 is nearly a 75 per cent increase since 2005.[86] Significant additional resources, however, are needed to support a strong and sustainable HIV response.

UNAIDS estimates that a US$25.1 billion investment is needed by 2010 to enable countries to reach universal access goals.[87] Simply maintaining the current pace of increased investments will not be sufficient. Apart from the investments available in 2008, an additional US$11 billion is needed to reach the targets in 2010.

UNICEF and UNAIDS have determined that about US$5.9 billion, or roughly one quarter of the US$25.1 billion investment needed to reach universal access goals, is needed specifically to meet universal access targets for women and children (*Figure 15*).[88] Table 3 outlines the minimum resources needed for low- and middle-income countries to reach 2010 targets on the four 'Ps'.

- **Preventing mother-to-child transmission of HIV:** It is estimated that **US$605 million** is needed to meet countries' universal access goals (following their own protocols) for PMTCT by 2010. The estimate includes HIV testing and counselling for pregnant women, various types of drug prophylaxis and counselling on infant feeding options. Drug prophylaxis may be a single-drug regimen, a combination prophylactic regimen or a highly active triple-drug regimen. Depending on the country policy and context, programmes may include the provision of infant formula for a period of six months or longer.

Figure 15. Global investment needed by 2010 for HIV services for pregnant women and children as a proportion of HIV services for adults



Source: All calculations are derived from the 2009 UNAIDS report, *What Countries Need: Investments needed for 2010 targets.*

- **Providing paediatric treatment and care:** It is estimated that **US$649 million** is needed for scaling up HIV treatment and care services for infants and children under 15 years of age.This should be regarded as a low estimate, because it includes only first-line paediatric ART and does not include early infant diagnosis.
- **Preventing infection among adolescents and young people:** At least **US$1.4 billion** is needed to scale up HIV prevention interventions for youth.The figure does not include special outreach and youth-friendly programmes necessary to increase young people's access to, and use of, many essential prevention interventions. Furthermore, due to a lack of data regarding the numbers of most-at-risk youth, the resources needed for young people who sell sex, men who have sex with men, injecting drug users and prisoners are not included in this estimate.
- **Protection and care for children affected by AIDS:** An estimated **US$2.5 billion** is needed to support orphans and vulnerable children.[89] While support may be provided in several ways, the estimated costs are those for cash grants to qualifying families and the provision of a full range of essential services (educational, health care, family, and community support, as well as organizational or administrative costs). More than 90 per cent of the estimated resources are needed in sub-Saharan Africa.
- **Prevention of violence against women:** An estimated **US$326 million** is needed to support measures to address violence against women. Preventing violence against women is cross-cutting through all four 'Ps', as protecting women, mothers and other female caregivers plays a vital role in HIV prevention, support, care and treatment.
- **Programme support costs for women and children:** It is estimated that **US$406 million** is needed for programme support costs for women and children. Programme costs are defined as the system-level costs above the point of contact with the patient or members of the target population.They are essential for the delivery of basic services to ensure informed programme and decision planning, effective and efficient operation, standardization and quality, and increasing demand for services.

Table 3. Investments needed by *Unite for Children, Unite against AIDS* target areas (US$ millions)

Country-defined targets	2009	2010
Preventing mother-to-child transmission of HIV	458	605
Providing paediatric treatment and care	512	649
Preventing infection among adolescents and young people	1,233	1,428
Protection and care for children affected by AIDS	1,739	2,499
Prevention of violence against women	157	326
Programme support costs	372	406
Total	**4,470**	**5,913**

Source: All calculations are derived from the 2009 UNAIDS report, *What Countries Need: Investments needed for 2010 targets.*

National commitments in response to the epidemic have been growing, as shown by the increased domestic spending in many countries, the largest source of financing for HIV programmes. More than half of the US$13.7 billion invested in HIV programming in 2008 came from countries affected by HIV and AIDS. About one third was from direct bilateral cooperation, with the rest coming from multilateral institutions (12 per cent) and the private sector (5 per cent).[90]

The global economic crisis has forced many governments to re-examine their investments. As economic adjustments are made, it is vital that they be seen through a lens of protecting those most vulnerable to the effects of this crisis – women and children.

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VIII. CALL TO ACTION

Now is the time to follow through on our commitments.

The progress described in this report represents steps along a continuum of evidence, action and results. It is clear that targets can be reached – but also obvious that, in most places, universal access goals are not yet being achieved. The evidence base for action is improving, but needs to be better. Investment needs to be bolstered, but it must also be used more judiciously.

Amid economic difficulties that are affecting all countries, it is important that sights remain fixed on the long term and that commitments to act in the short term are maintained and strengthened. Based on what is known today, the following actions must be priorities if women, children and young people are to have an opportunity to live and thrive AIDS-free:

1. **Accelerate the scale-up of PMTCT services and early infant diagnosis to contribute to the elimination of HIV transmission to young children.** Expand HIV prevention programmes for women of childbearing age together with expanded HIV testing and counselling of pregnant women and follow-up of results; provide more efficacious ARV regimens for PMTCT, including ART for pregnant women in need of treatment; early infant diagnosis and follow-up of these results; and the immediate treatment of babies diagnosed with HIV. Accelerated scale-up will require a decentralized approach, in which national programmes transfer the planning and implementation of services to sub-national levels and establish clear mechanisms for coordination, financing and accountability. It will also require the effective engagement of communities as partners in service delivery and the establishment of better links between health facilities and local communities. Particularly in generalized epidemic settings, strong health systems that allow for the integration of HIV prevention and treatment for women and children into MNCH services are crucial for speeding the scale-up of HIV-sensitive global health initiatives. HIV and AIDS provide an opportunity to revitalize health systems that can lead not only to improved outcomes for those affected by AIDS, but also to overall improvements in health care.
2. **Continually seek out new evidence to inform HIV prevention.** Behaviour change – one of the three aspects of 'combination prevention' – will not be effective without a better understanding of the relationship between what young people know about HIV and how they actually behave on the basis of that knowledge. These evidence gaps – what contextual factors enable young people to translate knowledge and skills into changes in their behaviour, and what factors prevent them from doing so – must be closed. In countries with low prevalence and concentrated epidemics, the evidence base on knowledge and behaviour among those young people most at risk is particularly weak. Much more remains to be understood about the 'entry points' to behaviour change in various settings – homes, schools and communities – and in

relationships with other young people. It is also necessary to understand how behaviour change can be enhanced as part of a national response, and whether such change results in reduced HIV infection. Further, it is important to implement and evaluate programmes based on operational research.

3. **Support and empower adolescents, particularly girls, to identify and respond to their own vulnerabilities.** There is an urgent need to address the factors that make girls and women more vulnerable to HIV infection. In southern Africa, evidence on patterns of early sexual debut, concurrent partnerships and intergenerational sex suggests the centrality of dealing with the social and cultural factors driving the epidemic among females, including women's status, discrimination and violence against women and girls, and gender disparities in education. School-based and other programmes to increase adolescents' knowledge of HIV and AIDS and impart the skills that will help reduce their vulnerability to HIV will be unsuccessful without supportive environments in the communities where adolescents – particularly girls – are expected to exercise such knowledge and skills. Furthermore, adolescent girls require information on sexual and reproductive health services in their communities. Boys and men, and parents and families, are essential to making the necessary social changes, so their involvement in such programmes is key.

4. **Protect the rights of adolescents and young people living with HIV to receive good-quality support and services.** Meeting this group's needs for care and treatment-adherence must be addressed as a priority and without discrimination. As these young people grow into adulthood, support services must consider with sensitivity their emerging sexuality, the stigma attached to their circumstances and their peer relationships. Positive health, dignity and prevention are especially crucial for adolescents and young people living with HIV who are sexually active, as

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are sexual and reproductive health services for adolescent girls and antenatal care with PMTCT services for adolescent girls who become pregnant. Where service delivery for adolescents and young people living with HIV is non-existent, or is inappropriate or irrelevant to their particular situations, new models of care, treatment and support must be developed – ideally with the participation of young people, who are best able to find solutions to these issues that concern them.

5. **Ensure that adolescents who are in situations of the greatest risk are reached by HIV prevention, treatment, care and support services.** Young men who have sex with men, young transgender people, young people involved in selling sex and young people injecting drugs are among the populations with the highest rates of HIV, yet few HIV programmes reach them. The evidence consistently shows that programmatic approaches focusing on pragmatic outcomes, such as reducing harm, are more effective than moralizing. Responses need to ensure that youth services and programmes respect the diversity of young people and respond to their needs, while recognizing the circumstances of most-at-risk groups and extending special protection to young people among them.

6. **Make sexual violence against girls and women socially unacceptable.** The focus should be on reducing the risk of HIV by making sexual violence against girls unacceptable and enforcing laws that make it punishable as a crime. Prevention of sexual violence against girls should be promoted as part of national and regional HIV prevention programmes. The fact that sexual violence against girls and HIV prevention are addressed by different ministries or departments is partly to blame for their low position on policy agendas. The AIDS response offers an opportunity to reduce sexual violence and to develop comprehensive responses to both sexual violence and HIV prevention within and beyond the health sector.

7. **Scale up child-sensitive social protection, a necessary part of the response to children affected by AIDS.** Effective social protection systems and programmes that are child-sensitive will encompass AIDS-affected children in their sweep, by putting cash and other social assistance at the disposal of families who need it. This will facilitate access to basic social services where they may have been inaccessible because of poverty and stigma, and will establish legal, policy and budgetary frameworks that protect children and their families against further vulnerability. Evidence has shown that cash transfers contribute to better outcomes for children. Social welfare ministries that are weak must be strengthened, so that these bodies can coordinate efforts of state and non-state providers of services. Civil society organizations have an important role within social welfare systems by helping to identify the most vulnerable and excluded children, including AIDS-affected children and their families. Civil society can both provide and facilitate access to essential social services, and strengthen community structures to support families and protect children from abuse.

8. **Strengthen community capacity to respond to the needs of children affected by AIDS by preventing the separation of families and improving the quality of alternative care.** Because families care for the vast majority of children affected by AIDS, the focus must be on supporting these families to provide quality care for children. Foster and kinship care need to be further supported as alternatives to residential care for children who are separated from their families. Residential care should remain a last resort that is temporary and put in place only when other forms of family-based alternative care cannot be arranged. As such, it should be linked to the community to the extent possible. Governments should assume responsibility for setting standards and monitoring residential care facilities run by communities, non-governmental organizations and faith-based organizations.

9. **Strengthen whole systems so that gains made on behalf of women and children affected by AIDS can be extended and sustained.** Programmes and policies are only as effective as the systems underpinning them. Linking various services, such as maternal and child health care with HIV services, has shown itself to be an effective way to progress towards universal access and improve health outcomes for all. This mindset must extend to other areas as well: to education, social welfare and social protection systems. Human resources and the organizational capacity of health systems must be improved to sustain gains in PMTCT and paediatric care. Services within health systems must be better linked.

10. **Improve data gathering and analysis to achieve results for children, and identify gaps in equitable coverage of and access to services.** Solid data that are disaggregated by age, sex, marital status and other characteristics can inform policymaking and programming, and can be used by governments and others seeking support and funding. There are also advances to be made in the area of operational research – in our knowledge of the epidemic and how it affects children and women, as well as in the effectiveness of the response in local contexts. Such knowledge can be enhanced by establishing links between national and local institutions and by strengthening up local research capacity. Improved data gathering and analysis and gender awareness must be positioned as human rights priorities. They will contribute to monitoring progress towards universal access goals and assessing whether the children and women who remain most vulnerable to the effects of HIV and AIDS realize the benefits of investment.

Ultimately, investment will not be used wisely and the many gaps that exist in coverage, quality and equity will not be closed if knowledge is not turned into practice. We must follow through – on our commitments, on closing the gaps in the global knowledge base, and in honestly acknowledging where efforts fall short so that work may be improved.

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ANNEX

NOTES ON THE DATA

DATA SOURCES AND COMPILATION

The data and analyses presented in this *Fourth Stocktaking Report* are derived from information in UNICEF global databases that are compiled from various sources. These include 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 collected annually by UNICEF, WHO and UNAIDS through a Joint Annual Reporting Form for monitoring the health sector response to HIV/AIDS (2009); country estimates of HIV care and treatment needs modelled by UNAIDS and WHO in collaboration with countries; and the United Nations Population Division country estimates of the number of annual births.

For the first time in 2009, WHO, UNICEF and UNAIDS jointly collected data from national programmes worldwide, using a common reporting tool to monitor and report on their health sectors' progress towards universal access. The tool comprises 46 indicators to track progress towards universal access to HIV prevention, treatment and care, including HIV interventions for women and children such as preventing mother-to-child transmission. The joint reporting tool – which replaces the PMTCT and Paediatric HIV Care and Treatment Report Card – collected data for the 12-month period of January–December 2008.

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

In 2009, UNAIDS and WHO refined the HIV and AIDS estimation methodology to reflect more reliable data available from population-based surveys, expanded national sentinel surveillance systems and programme service statistics in a number of countries. As a result, UNAIDS has retrospectively generated new estimates for PMTCT and paediatric HIV treatment needs for 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. As new data become available, however, estimates are regularly updated. New estimates of the numbers of people living with HIV and HIV prevalence were not available at the time of this publication and are due out in the AIDS epidemic update report in November 2009.

Similarly, global estimates of the number of women needing PMTCT services have been refined, and the coverage rates reported for 2004, 2005, 2006 and 2007 have thus been recalculated using the newly generated estimates. These estimates included the most recent country-reported data from 2008. The methods and assumptions of the UNAIDS and WHO estimation model continue to evolve and are regularly updated as new data become available. In addition, improved country data on HIV prevalence also contribute to revising and updating the model over time.

Estimates on the HIV treatment needs of children under 15 years old are now available and have been included, and these estimates are based on the best available data at the time of publication. Guidelines on antiretroviral treatment to prevent mother-to-child transmission of HIV and on antiretroviral therapy for children will be reviewed at the end of 2009 in the light of new evidence, which may lead to changes in the estimation assumptions and methods. The improvements in the collection of data may also allow the model parameters to be better adjusted to reflect the programmatic impact of PMTCT interventions on the number of children newly infected with HIV.

Overall, the latest estimates by UNAIDS and WHO of PMTCT need and the number of children living with HIV for 2008 are lower than estimates published in previous reports. The differences between these newly generated estimates and previously published estimates are not related to trends over time, and are therefore not comparable. Nor are other revised estimates comparable to estimates published in previous years. Trends over time may be assessed, however, using UNAIDS methodological revisions applied retrospectively to earlier HIV prevalence data.

More details about the data, specific countries reporting and about HIV estimates methodology can be found in *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009*.

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

	Estimated adult HIV prevalence rate (%) (15–49 years), 2007	Antenatal care coverage (%), 2003–2008*	Annual number of births, 2008 (thousands)	Estimated number of HIV-positive pregnant women, 2008z			Reported number of HIV-positive pregnant women who received ARVs for PMTCT, 2008	Estimated percentage of HIV-positive pregnant women who received ARVs for PMTCT, 2008**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Afghanistan	–	16	1,269	–	–	–	–	–	–	–
Albania	–	97	46	–	–	–	–	–	–	–
Algeria	0.1	89	714	<500	<200	1,600	18	–	1	9
Angola	2.1	80	774	16,000	8,000	24,000	2,962	19	12	37
Antigua and Barbuda	–	100	1	–	–	–	–	–	–	–
Argentina	0.5	99	689	1,100	<1,000	1,800	2,463	–	>95	>95
Armenia	0.1	93	47	<100	<100	<100	6	–	9	40
Azerbaijan	0.2	77	166	<100	<100	<100	17	–	25	>95
Bahamas	3.0	98	6	–	–	–	–	–	–	–
Bahrain	–	–	14	–	–	–	–	–	–	–
Bangladesh	–	51	3,430	<100	<100	<200	6 a	–	5	15
Barbados	1.2	100	3	–	–	–	–	–	–	–
Belarus	0.2	99	96	– m	–	–	153	–	–	–
Belize	2.1	94	7	<200	<100	<500	65	–	20	68
Benin	1.2	84	342	3,600	1,700	5,500	1,447	40	26	86
Bhutan	0.1	88	15	<100	<100	<100	19	–	86	>95
Bolivia (Plurinational State of)	0.2	77	263	<500	<200	<1,000	35 b	–	6	21
Bosnia and Herzegovina	<0.1	99	34	–	–	–	1	–	–	–
Botswana	23.9	–	47	12,000	7,500	16,000	11,971	>95	75	>95
Brazil	0.6	98	3,105	– m	–	–	6,844	–	–	–
Brunei Darussalam	–	–	8	–	–	–	–	–	–	–
Bulgaria	–	–	73	<100	<100	<100	1 n	–	3	9
Burkina Faso	1.6	85	721	6,700	3,400	10,000	1,333	20	13	39
Burundi	2.0	92	278	16,000	7,200	24,000	1,488 q	9	6	21
Cambodia	0.8	69	361	1,400	<1,000	2,200	777	–	35	>95
Cameroon	5.1	82	704	36,000	19,000	52,000	10,144	28	20	53
Cape Verde	–	98	12	–	–	–	57	–	–	–
Central African Republic	6.3	69	154	8,300	4,400	12,000	1,936	23	16	44
Chad	3.5	39	498	15,000	7,700	23,000	722	5	3	9
Chile	0.3	–	251	<500	<200	<1,000	203	–	32	>95
China	0.1	91	18,134	– m	–	–	980 c	–	–	–
Colombia	0.6	94	918	3,200	1,700	5,100	404	–	8	24
Comoros	<0.1	75	21	<100	<100	<100	0	–	0	0
Congo	3.5	86	125	4,300	2,200	6,300	438	10	7	20
Cook Islands	–	–	0	–	–	–	–	–	–	–
Costa Rica	0.4	90	75	<100	<100	<200	21 o	–	13	50
Côte d'Ivoire	3.9	85	722	22,000	11,000	34,000	9,296	41	28	83
Croatia	<0.1	–	42	–	–	–	2 n	–	–	–
Cuba	0.1	100	118	<100	<100	<200	41 n	–	34	>95
Democratic People's Republic of Korea	–	–	327	<100	<100	<100	–	–	–	–
Democratic Republic of the Congo	–	85	2,886	32,000	17,000	48,000	1,776	5	4	10
Djibouti	3.1	92	24	<1,000	<500	1,100	43	6	4	13
Dominica	–	100	1	–	–	–	1 n	–	–	–
Dominican Republic	1.1	99	224	1,900	<1,000	2,800	1,034	–	37	>95
Ecuador	0.3	84	281	<1,000	<500	1,200	277	–	24	81
Egypt	–	74	2,015	<500	<100	<500	3	–	1	3
El Salvador	0.8	94	124	<1,000	<500	<1,000	189	–	23	69
Equatorial Guinea	3.4	–	25	1,400	<1,000	2,300	567	40	25	76
Eritrea	1.3	–	182	1,500	<1,000	2,600	424	29	16	59
Ethiopia	2.1	28	3,093	36,000	18,000	54,000	6,354	18	12	35
Fiji	0.1	–	18	<100	<100	<100	3 d	–	17	75
Gabon	5.9	–	40	1,800	<1,000	2,900	634	35	22	70
Gambia	0.9	98	61	1,000	<1,000	1,800	321	–	18	64
Georgia	0.1	94	52	<100	<100	<100	25	–	78	>95
Ghana	1.9	96	757	13,000	6,400	19,000	4,991	39	26	78
Grenada	–	100	2	–	–	–	7 n	–	–	–
Guatemala	0.8	–	453	2,300	1,100	3,600	321	–	9	29
Guinea	1.6	88	392	5,400	2,700	8,200	1,205	22	15	45
Guinea-Bissau	1.8	78	65	1,600	<1,000	2,500	305	20	12	39
Guyana	2.5	81	14	<200	<100	<500	211	–	85	>95
Haiti	2.2	85	273	5,500	2,700	8,500	2,500 e	46	29	92
Honduras	0.7	92	202	<1,000	<500	1,100	300	–	27	94
India	0.3	74	26,913	49,000	25,000	80,000	10,673	–	13	42
Indonesia	0.2	93	4,220	2,300	1,100	3,800	165	–	4	15
Iran (Islamic Republic of)	0.2	98	1,388	<1,000	<500	1,500	52 q	–	3	10
Iraq	–	84	944	–	–	–	0	–	–	–

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

	Estimated adult HIV prevalence rate (%) (15–49 years), 2007	Antenatal care coverage (%), 2003–2008*	Annual number of births, 2008 (thousands)	Estimated number of HIV-positive pregnant women, 2008z			Reported number of HIV-positive pregnant women who received ARVs for PMTCT, 2008	Estimated percentage of HIV-positive pregnant women who received ARVs for PMTCT, 2008**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Jamaica	1.6	91	52	<500	<200	<1,000	515	–	70	>95
Jordan	–	99	157	–	–	–	2	–	–	–
Kazakhstan	0.1	100	304	<200	<100	<200	174	–	>95	>95
Kenya	–	88	1,506	110,000	53,000	160,000	59,601	56	37	>95
Kiribati	–	–	2	–	–	–	0	–	–	–
Kuwait	–	–	52	–	–	–	–	–	–	–
Kyrgyzstan	0.1	97	120	<200	<100	<500	15	–	5	19
Lao People's Democratic Republic	0.2	35	170	<200	<100	<500	21	–	8	28
Lebanon	0.1	96	66	<100	<100	<100	–	–	–	–
Lesotho	23.2	90	59	14,000	8,600	19,000	8,056	57	43	94
Liberia	1.7	79	145	2,700	1,300	4,100	381	14	9	29
Libyan Arab Jamahiriya	–	–	147	–	–	–	–	–	–	–
Madagascar	0.1	80	687	<1,000	0	2,000	18	–	1	–
Malawi	11.9	92	599	– m	32,000	82,000	33,838 f	–	41	> 95
Malaysia	0.5	79	551	1,100	<500	1,900	189	–	10	39
Maldives	–	–	6	<100	<100	<100	0	–	0	0
Mali	1.5	70	542	4,300	2,100	6,700	1,115	–	17	54
Marshall Islands	–	81	1	–	–	–	–	–	–	–
Mauritania	0.8	75	108	<500	<200	<1,000	45	–	5	29
Mauritius	1.7	–	18	<200	<100	<500	19 n	–	8	37
Mexico	0.3	94	2,049	5,700	2,900	8,500	458	–	5	16
Micronesia (Federated States of)	–	–	3	–	–	–	–	–	–	–
Mongolia	0.1	99	50	<100	<100	<100	0	–	0	0
Montenegro	–	97	115	–	–	–	1 n	–	–	–
Morocco	0.1	68	646	<500	<200	<1,000	56	–	9	33
Mozambique	12.5	89	876	110,000	50,000	180,000	46,848	42	26	93
Myanmar	0.7	–	1,020	5,200	2,100	10,000	1,377	–	14	65
Namibia	15.3	95	59	8,200	4,400	12,000	7,474	91	63	>95
Nauru	–	95	0	–	–	–	–	–	–	–
Nepal	0.5	44	732	1,400	<1,000	2,100	47	–	2	6
Nicaragua	0.2	90	140	<100	<100	<100	53	–	65	>95
Niger	0.8	46	791	3,700	1,800	6,200	1,183	–	19	67
Nigeria	3.1	58	6,028	210,000	110,000	300,000	19,804	10	7	18
Niue	–	–	0	–	–	–	–	–	–	–
Occupied Palestinian Territory	–	99	148	–	–	–	–	–	–	–
Oman	–	–	61	<100	<100	<100	4	–	11	44
Pakistan	0.1	61	5,337	1,800	<1,000	3,700	14	–	<1	2
Palau	–	–	0	–	–	–	–	–	–	–
Panama	1.0	–	70	<500	<100	<1,000	71 n, k	–	13	>95
Papua New Guinea	1.5	79	207	1,900	<1,000	2,900	257	13	9	28
Paraguay	0.6	96	154	<500	<200	<1,000	156	–	29	>95
Peru	0.5	91	609	<1,000	<500	1,600	477	–	29	>95
Philippines	–	91	2,236	<200	<100	<500	1	–	<1	1
Qatar	–	–	15	–	–	–	–	–	–	–
Republic of Korea	<0.1	–	452	–	–	–	–	–	–	–
Republic of Moldova	0.4	98	45	– m	–	–	129	–	–	–
Romania	0.1	94	214	<200	<100	<500	109	–	32	>95
Russian Federation	1.1	–	1,545	– m	–	–	8,367	–	–	–
Rwanda	2.8	96	403	10,000	5,000	16,000	7,197	72	45	>95
Saint Kitts and Nevis	–	100	0	–	–	–	–	–	–	–
Saint Lucia	–	99	3	–	–	–	11 n	–	–	–
Saint Vincent and the Grenadines	–	95	2	–	–	–	–	–	–	–
Samoa	–	–	4	–	–	–	–	–	–	–
Sao Tome and Principe	–	97	5	–	–	–	22	–	–	–
Saudi Arabia	–	–	591	–	–	–	–	–	–	–
Senegal	1.0	87	470	3,600	1,600	5,600	473	–	8	29
Serbia	0.1	98	8	<100	<100	<100	2	–	3	12
Seychelles	–	–	3	–	–	–	2	–	–	–
Sierra Leone	1.7	81	223	3,300	1,700	5,000	1,018	31	20	60
Singapore	0.2	–	37	–	–	–	–	–	–	–
Solomon Islands	–	74	16	–	–	–	0	–	–	–
Somalia	0.5	26	395	1,900	<1,000	3,100	6	–	<1	1
South Africa	18.1	92	1,091	200,000	120,000	280,000	149,118	73	53	>95
Sri Lanka	–	99	365	<100	<100	<200	5	–	5	22
Sudan	1.4	64	1,296	12,000	5,800	20,000	68 r	1	<1	1
Suriname	2.4	90	10	<100	<100	<200	35 o	–	22	>95

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

	Estimated adult HIV prevalence rate (%) (15–49 years), 2007	Antenatal care coverage (%), 2003–2008*	Annual number of births, 2008 (thousands)	Estimated number of HIV-positive pregnant women, 2008z			Reported number of HIV-positive pregnant women who received ARVs for PMTCT, 2008	Estimated percentage of HIV-positive pregnant women who received ARVs for PMTCT, 2008**		
				Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Swaziland	26.1	85	35	9,700	6,000	12,000	10,811 h	>95	87	>95
Syrian Arab Republic	–	84	590	–	–	–	0 n	–	–	–
Tajikistan	0.3	89	193	– m	–	–	21	–	–	–
Thailand	1.4	98	977	9,000	2,700	17,000	5,769 s	–	33	>95
The former Yugoslav Republic of Macedonia	<0.1	94	22	–	–	–	0	–	–	–
Timor-Leste	–	61	44	–	–	–	1	–	–	–
Togo	3.3	84	213	6,300	3,100	9,800	1,127	18	12	37
Tonga	–	–	3	–	–	–	–	–	–	–
Trinidad and Tobago	1.5	96	20	–	–	–	–	–	–	–
Tunisia	0.1	96	164	<100	<100	<100	1	–	2	7
Turkey	–	92	1,348	–	–	–	4 o	–	–	–
Turkmenistan	<0.1	99	111	–	–	–	0 o	–	–	–
Tuvalu	–	97	0	–	–	–	–	–	–	–
Uganda	5.4	94	1,466	82,000	44,000	120,000	41,598 s	50	36	95
Ukraine	1.6	99	459	2,600	1,200	4,100	3,368	–	82	>95
United Arab Emirates	–	–	63	–	–	–	–	–	–	–
United Republic of Tanzania	6.2	76	1,771	– m	40,000	130,000	70,944	–	53	>95
Uruguay	0.6	97	50	– m	–	–	53 o	–	–	–
Uzbekistan	0.1	99	553	<500	<200	<1,000	95 n	–	17	74
Vanuatu	–	84	7	–	–	–	–	–	–	–
Venezuela (Bolivarian Republic of)	–	–	599	2,400	1,200	4,100	310 o	–	8	27
Viet Nam	0.5	91	1,494	3,300	1,600	5,100	1,354	–	27	87
Yemen	–	47	846	–	–	–	3	–	–	–
Zambia	15.2	94	542	70,000	38,000	96,000	41,286	59	43	>95
Zimbabwe	15.3	94	378	53,000	29,000	73,000	18,756	36	26	64
SUMMARY INDICATORS										
Africa	2.9 b/	72 †	35,318 †	1,290,000	1,000,000	1,600,000	577,000	45	37	57
Sub-Saharan Africa	5.2 b/	71 †	31,632 †	1,300,000	1,000,000	1,600,000	576,900	45	37	57
Eastern and Southern Africa	7.7 b/	72 †	14,283 †	900,000	680,000	1,100,000	516,400	58	47	76
West and Central Africa	2.7 b/	71 †	16,029 †	380,000	260,000	510,000	60,300	16	12	23
Middle East and North Africa	0.2 b/	78 †	9,941 †	15,000	8,300	24,000	<500	2	1	3
Asia	0.2 b/	78 †	68,409 †	82,000	52,000	120,000	21,700	26	17	42
South Asia	0.2 b/	68 †	38,067 †	52,000	28,000	86,000	10,800	21	13	38
East Asia and the Pacific	0.2 b/	91 †	30,342 †	30,000	18,000	46,000	10,900	37	23	61
Latin America and the Caribbean	0.6 b/	94 †	10,768 †	32,000	24,000	41,000	17,100	54	42	71
CEE/CIS	0.7 b/	95 †	5,593 †	13,200	7,900	19,000	12,500	95	65	>95
Low- and middle-income countries	–	–	–	1,400,000	1,100,000	1,700,000	628,400	45	37	57
Developing countries	0.9 b/	78 †	122,474 †	–	–	–	–	–	–	–
World	0.8 b/	78 †	136,241 †	–	–	–	–	–	–	–

DEFINITIONS OF THE INDICATORS

Estimated adult HIV prevalence rate: Percentage of adults (15–49 years old) living with HIV as of end-2007.

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 2008.

Estimated number of HIV-positive pregnant women: Estimated number of pregnant women living with HIV as of 2008.

Reported number of HIV-positive 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-positive pregnant women who received ARVs for PMTCT: Calculated by dividing the reported number of HIV-positive pregnant women who received ARVs for PMTCT by the estimated unrounded number of HIV-positive pregnant women in 2008. The point estimates and ranges are given for countries with a generalized epidemic, whereas only ranges are given for countries with a low or concentrated epidemic. Ranges in coverage estimates are based on plausibility (uncertainty) bounds in the denominator, i.e., low and high estimated number of HIV-positive pregnant women.

MAIN DATA SOURCES

Estimated adult HIV prevalence rate: UNAIDS, *2008 Report on the Global AIDS Epidemic.*

Antenatal care coverage: UNICEF, *The State of the World's Children Special Edition: Celebrating 20 Years of the Convention on the Rights of the Child.*

Annual number of births: UNICEF, *The State of the World's Children Special Edition: Celebrating 20 Years of the Convention on the Rights of the Child.*

Estimated number of HIV-positive pregnant women: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Reported number of HIV-positive pregnant women who received ARVs for PMTCT: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Estimated percentage of HIV-positive pregnant women who received ARVs for PMTCT: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

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 The data are from the International Centre for Diarrhoeal Disease Research, Bangladesh prevention of parent-to-child transmission pilot site.

b Data are for women diagnosed in Departmental Centres of Reference and Surveillance.

c Data are collected from 333 priority counties out of a total of 2,860.

d Data are from the three antenatal care clinics based at the three tertiary level hospitals (January–December 2008).

e PEPFAR database and Sogebank Foundation (Global Fund), January–December 2008.

f The 2008 reporting system for services for preventing mother-to-child transmission did not provide for combination antiretroviral regimen prophylaxis. However, through the 2008 National HIV Situation Analysis, data on combination regimens were collected from five health centres.

h Possible double-counting: if a woman's CD4 count falls below the normal level (350 per mm2), she will be initiated on ART, which means she will be double-counted.

k The data for Panama were reported from January 2007 to September 2007. The data were projected to a 12-month period based on the monthly increase value. The reported value was 53.

m Estimates of the number of pregnant women living with HIV needing antiretrovirals to prevent mother-to-child transmission are currently being reviewed and will be adjusted, as appropriate, based on ongoing data collection and analysis. Therefore, some countries have requested only a range to be published or no needs at all.

n Reporting period is from January–December 2007.

o Reporting period is from January–December 2006.

q Reporting period is from September 2007–August 2008.

r Two separate reports were received from the Sudan: Northern Sudan reported 68 for the period between 2007 and 2008; Southern Sudan was not able to report on HIV-positive pregnant women receiving ARVs for PMTCT, as the PMTCT programme is just starting to be implemented.

s Reporting period is from October 2007–September 2008.

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.

b/ Regional average estimates are for 2008 and are based on updates to the *2009 AIDS Epidemic Update* (forthcoming at the time this report went to press). Revised country estimates will be forthcoming in 2010. 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

	Estimated number of children (0–14 years old) living with HIV, 2007			Estimated number of HIV-positive pregnant women, 2008z			Number of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	% of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	Estimated number of children needing antiretroviral therapy based on UNAIDS/WHO methods, 2008c			Number of children (0–14 years old) receiving ART, 2008**	Estimated antiretroviral therapy coverage among children, December 2008d		
	Estimate	Low estimate	High estimate	Estimate	Low estimate	High estimate			Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Afghanistan	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Albania	–	–	–	–	–	–	–	–	–	–	–	12	–	–	–
Algeria	–	–	–	<500	<200	1,600	–	–	–	<100	<1,000	61	–	11	79
Angola	17,000	12,000	35,000	16,000	8,000	24,000	–	–	7,400	3,900	12,000	702	9	6	18
Antigua and Barbuda	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Argentina	–	–	–	1,100	<1,000	1,800	2,160	>95	–	<500	<500	2,000	–	>95	>95
Armenia	–	–	–	<100	<100	<100	4	11	–	<100	<100	4	–	27	67
Azerbaijan	–	–	–	<100	<100	<100	13	34	–	<100	<100	0	–	0	0
Bahamas	–	–	<200	–	–	–	–	–	–	–	–	–	–	–	–
Bahrain	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Bangladesh	–	–	–	<100	<100	<200	4	5	–	<100	<100	6	–	13	35
Barbados	–	<100	–	–	–	–	–	–	–	–	–	–	–	–	–
Belarus	–	–	–	– m	–	–	170	–	– g	–	–	85	–	–	–
Belize	<200	–	<500	<200	<100	<500	9 h	5	–	<100	<200	64	–	57	80
Benin	5,400	4,700	6,300	3,600	1,700	5,500	1,314	36	1,500	<1,000	2,400	650	44	27	94
Bhutan	–	–	–	<100	<100	<100	7	70	–	<100	<100	1	–	13	50
Bolivia (Plurinational State of)	–	–	–	<500	<200	<1,000	27	8	–	<100	<500	38	–	14	41
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–
Botswana	15,000	13,000	16,000	12,000	7,500	16,000	7,485	60	7,900	4,900	10,000	7,091	90	70	>95
Brazil	–	–	–	– m	–	–	–	–	– g	–	–	6,418	–	–	–
Brunei Darussalam	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Bulgaria	–	–	–	<100	<100	<100	–	–	–	<100	<100	3	–	19	50
Burkina Faso	10,000	8,400	12,000	6,700	3,400	10,000	462	7	4,100	2,100	6,100	1,028	25	17	48
Burundi	15,000	12,000	19,000	16,000	7,200	24,000	1,046	7	8,000	4,400	11,000	1,300	16	12	30
Cambodia	4,400	4,000	5,000	1,400	<1,000	2,200	203 h	14	–	1,800	2,400	3,067	–	>95	>95
Cameroon	45,000	38,000	51,000	36,000	19,000	52,000	8,315 p	23	18,000	10,000	26,000	2,090	11	8	20
Cape Verde	–	–	–	–	–	–	54	–	–	–	–	29	–	–	–
Central African Republic	14,000	12,000	16,000	8,300	4,400	12,000	741	9	4,700	2,400	6,700	462	10	7	19
Chad	19,000	14,000	27,000	15,000	7,700	23,000	63 i	<1	7,300	3,700	11,000	480	7	4	13
Chile	–	–	–	<500	<200	<1,000	–	–	–	<200	<500	186	–	70	>95
China	–	–	–	– m	–	–	650 i	–	– g	–	–	1,120	–	–	–
Colombia	–	–	–	3,200	1,700	5,100	–	–	–	<1,000	2,600	3	–	<1	<1
Comoros	–	<100	–	<100	<100	<100	0	0	–	<100	<100	1	–	20	>95
Congo	6,600	5,600	7,700	4,300	2,200	6,300	–	–	2,300	1,100	3,500	488	21	14	44
Cook Islands	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Costa Rica	–	–	–	<100	<100	<200	40 i	43	–	<100	<100	52	–	53	>95
Côte d'Ivoire	52,000	44,000	58,000	22,000	11,000	34,000	–	–	14,000	6,900	21,000	2,821	20	13	41
Croatia	–	–	–	–	–	–	–	–	–	–	–	4	–	–	–
Cuba	–	–	–	<100	<100	<200	1 h	1	–	<100	<100	19	–	37	>95
Democratic People's Republic of Korea	–	–	–	<100	<100	<100	–	–	–	<100	<100	–	–	–	–
Democratic Republic of the Congo	–	37,000	52,000	32,000	17,000	48,000	83 f	0	16,000	9,900	22,000	4,053	25	18	41
Djibouti	1,100	<1,000	1,400	<1,000	<500	1,100	93	13	<500	<200	<1,000	24	7	4	13
Dominica	–	–	–	–	–	–	2 i	–	–	–	–	2	–	–	–
Dominican Republic	2,700	2,200	3,300	1,900	<1,000	2,800	–	–	– g	–	–	782	–	–	–
Ecuador	–	–	–	<1,000	<500	1,200	–	–	–	<500	<1,000	29	–	5	10
Egypt	–	–	–	<500	<100	<500	–	–	–	<100	<200	23	–	13	55
El Salvador	–	–	–	<1,000	<500	<1,000	10	2	–	<100	<500	562	–	>95	>95
Equatorial Guinea	<1000	–	1,100	1,400	<1,000	2,300	–	–	<1,000	<500	<1,000	14	3	2	6
Eritrea	3,100	2,300	4,400	1,500	<1,000	2,600	225	15	<1,000	<500	1,400	249	29	17	54
Ethiopia	92,000	80,000	100,000	36,000	18,000	54,000	895	2	23,000	12,000	34,000	7,399	33	22	61
Fiji	–	–	–	<100	<100	<100	2	25	–	<100	<100	0	–	0	0
Gabon	2,300	1,600	3,200	1,800	<1,000	2,900	219	12	<1,000	<500	1,300	217	26	16	58
Gambia	–	–	<1,000	1,000	<1,000	1,800	393	38	–	<200	<1,000	309	–	44	>95
Georgia	–	–	–	<100	<100	<100	19	>95	–	<100	<100	24	–	>95	>95
Ghana	17,000	15,000	19,000	13,000	6,400	19,000	–	–	5,900	2,600	9,200	829	14	9	31
Grenada	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–
Guatemala	–	–	–	2,300	1,100	3,600	222	10	–	<1,000	1,700	399	–	23	54
Guinea	6,300	5,000	7,900	5,400	2,700	8,200	869	16	2,400	1,100	3,600	511	22	14	47
Guinea-Bissau	1,500	1,100	2,200	1,600	<1,000	2,500	–	–	<1,000	<500	1,200	97	13	8	26
Guyana	–	–	<1000	<200	<100	<500	90 i	60	–	<100	<200	165	–	>95	>95
Haiti	6,800	5,800	8,100	5,500	2,700	8,500	448	8	3,600	2,500	4,700	1,288	36	27	52
Honduras	1,600	1,000	3,000	<1,000	<500	1,100	–	–	–	<1,000	1,100	660	–	63	>95

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

	Estimated number of children (0–14 years old) living with HIV, 2007			Estimated number of HIV-positive pregnant women, 2008z			Number of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	% of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	Estimated number of children needing antiretroviral therapy based on UNAIDS/WHO methods, 2008c			Number of children (0–14 years old) receiving ART, 2008**	Estimated antiretroviral therapy coverage among children, December 2008d		
	Estimate	Low estimate	High estimate	Estimate	Low estimate	High estimate			Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
India	–	–	–	49,000	25,000	80,000	1,200 i	2	–	16,000	46,000	13,211	–	29	82
Indonesia	–	–	–	2,300	1,100	3,800	25 h	1	–	<500	1,500	356	–	24	78
Iran (Islamic Republic of)	–	–	–	<1,000	<500	1,500	20	2	–	<500	<1,000	30	–	4	11
Iraq	–	–	–	–	–	–	0	–	–	–	–	0	–	–	–
Jamaica	–	–	<1000	<500	<200	<1,000	–	–	–	<500	<500	400	–	94	>95
Jordan	–	–	–	–	–	–	0	–	–	–	–	2	–	–	–
Kazakhstan	–	–	–	<200	<100	<200	148	>95	–	<100	<100	132	–	>95	>95
Kenya	–	130,000	180,000	110,000	53,000	160,000	2,091	2	49,000	25,000	71,000	20,517	42	29	83
Kiribati	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Kuwait	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Kyrgyzstan	–	–	–	<200	<100	<500	27	15	–	<100	<200	37	–	28	>95
Lao People's Democratic Republic	–	–	–	<200	<100	<500	17	10	–	<100	<200	72	–	53	>95
Lebanon	–	–	–	<100	<100	<100	–	–	–	<100	<100	9	–	28	69
Lesotho	12,000	11,000	13,000	14,000	8,600	19,000	1,542	11	7,300	4,300	9,700	3,038	42	31	70
Liberia	3,100	2,300	6,300	2,700	1,300	4,100	112 l	4	1,100	<1,000	1,800	92	8	5	17
Libyan Arab Jamahiriya	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Madagascar	<500	–	<1,000	<1,000	0	2,000	–	–	–	<200	1,000	4	–	0	3
Malawi	91,000	80,000	100,000	– m	32,000	82,000	21,841	37	– g	17,000	45,000	13,600	–	33	84
Malaysia	–	–	–	1,100	<500	1,900	–	–	–	<500	<1,000	501	–	55	>95
Maldives	–	–	–	<100	<100	<100	0	0	–	<100	<100	0	–	0	0
Mali	9,400	7,800	11,000	4,300	2,100	6,700	4,507	>95	–	<1,000	3,400	1,383	–	41	>95
Marshall Islands	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Mauritania	<500	–	<1,000	<500	<200	<1,000	18 h	4	–	<100	<1,000	13	–	3	14
Mauritius	<100	–	<200	<200	<100	<500	–	–	–	<100	<100	–	–	–	–
Mexico	–	–	–	5,700	2,900	8,500	–	–	–	1,300	3,600	1,356	–	38	>95
Micronesia (Federated States of)	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Mongolia	–	–	–	<100	<100	<100	0	0	–	<100	<100	0	–	0	0
Montenegro	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–
Morocco	–	–	–	<500	<200	<1,000	19	5	–	<100	<500	106	–	48	>95
Mozambique	100,000	87,000	120,000	110,000	50,000	180,000	– r	–	45,000	24,000	67,000	9,393	21	14	40
Myanmar	–	–	–	5,200	2,100	10,000	265 q	5	–	1,400	4,700	966	–	21	71
Namibia	14,000	12,000	16,000	8,200	4,400	12,000	–	–	5,800	3,100	7,800	7,504	>95	>95	>95
Nauru	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Nepal	–	–	–	1,400	<1,000	2,100	57	4	–	<500	1,200	119	–	10	26
Nicaragua	–	–	–	<100	<100	<100	49	>95	–	<100	<100	68	–	>95	>95
Niger	3,200	2,500	4,200	3,700	1,800	6,200	201	5	–	<1,000	3,200	140	–	4	16
Nigeria	220,000	170,000	370,000	210,000	110,000	300,000	5,650	3	110,000	57,000	160,000	12,565	12	8	22
Niue	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Occupied Palestinian Territory	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Oman	–	–	–	<100	<100	<100	4	21	<100	<100	<100	30	–	>95	>95
Pakistan	–	–	–	1,800	<1,000	3,700	1	0	<1,000	<500	1,400	38	–	3	12
Palau	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Panama	–	–	–	<500	<100	<1,000	62 ‡	28	<200	<100	<500	267	–	90	>95
Papua New Guinea	1,100	<1,000	1,200	1,900	<1,000	2,900	99	5	<1,000	<1,000	1,500	329	33	22	61
Paraguay	–	–	–	<500	<200	<1,000	121	38	<200	<100	<200	130	–	67	>95
Peru	–	–	–	<1,000	<500	1,600	–	–	<500	<200	<1,000	426	–	58	>95
Philippines	–	–	–	<200	<100	<500	1	1	<100	<100	<200	11	–	8	31
Qatar	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Republic of Korea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Republic of Moldova	–	–	<100	– m	–	–	28	–	– g	–	–	31	–	–	–
Romania	–	–	–	<200	<100	<500	3	2	<500	<100	<1,000	216	–	33	>95
Russian Federation	–	–	–	– m	–	–	–	–	– g	–	–	1,998	–	–	–
Rwanda	19,000	17,000	21,000	10,000	5,000	16,000	5,347	53	5,600	2,600	8,300	5,635	>95	68	>95
Saint Kitts and Nevis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saint Lucia	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–
Saint Vincent and the Grenadines	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Samoa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sao Tome and Principe	–	–	–	–	–	–	11	–	–	–	–	5	–	–	–
Saudi Arabia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Senegal	3,100	2,500	3,700	3,600	1,600	5,600	–	–	–	<1,000	2,800	586	–	21	68

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

	Estimated number of children (0–14 years old) living with HIV, 2007			Estimated number of HIV-positive pregnant women, 2008z			Number of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	% of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis, 2008	Estimated number of children needing antiretroviral therapy based on UNAIDS/WHO methods, 2008c			Number of children (0–14 years old) receiving ART, 2008**	Estimated antiretroviral therapy coverage among children, December 2008d		
	Estimate	Low estimate	High estimate	Estimate	Low estimate	High estimate			Estimate	Low estimate	High estimate		Estimate	Low estimate	High estimate
Serbia	–	–	–	<100	<100	<100	1	3	–	<100	<100	10	–	>95	>95
Seychelles	–	–	–	–	–	–	3	–	–	–	–	11	–	–	–
Sierra Leone	4,000	3,000	5,300	3,300	1,700	5,000	363	11	1,300	<1,000	2,100	237	18	11	38
Singapore	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Solomon Islands	–	–	–	–	–	–	0	–	–	–	–	–	–	–	–
Somalia	<1000	–	1,600	1,900	<1,000	3,100	0	0	–	<500	1,400	9	–	1	2
South Africa	280,000	230,000	320,000	200,000	120,000	280,000	–	–	94,000	53,000	130,000	57,228	61	45	>95
Sri Lanka	–	–	–	<100	<100	<200	5	9	–	<100	<100	7	–	16	64
Sudan	25,000	18,000	33,000	12,000	5,800	20,000	14 *	<1	6,200	2,900	10,000	153	2	1	5
Suriname	<200	–	<500	<100	<100	<200	–	–	–	<100	<200	58	–	48	>95
Swaziland	15,000	14,000	17,000	9,700	6,000	12,000	8,238	85	3,200	2,000	4,100	2,897	89	70	>95
Syrian Arab Republic	–	–	–	–	–	–	–	–	–	–	–	4	–	–	–
Tajikistan	–	–	–	– m	–	–	1 h	–	– g	–	–	4	–	–	–
Thailand	14,000	12,000	17,000	9,000	2,700	17,000	–	–	–	11,000	17,000	8,736	–	52	81
The former Yugoslav Republic of Macedonia	–	–	–	–	–	–	0	–	–	–	–	1	–	–	–
Timor-Leste	–	–	–	–	–	–	–	–	–	–	–	3	–	–	–
Togo	10,000	8,400	12,000	6,300	3,100	9,800	737	12	3,100	1,400	5,000	672	22	14	49
Tonga	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Trinidad and Tobago	–	–	<500	–	–	–	–	–	–	–	–	–	–	–	–
Tunisia	–	–	–	<100	<100	<100	–	–	–	<100	<100	10	–	38	>95
Turkey	–	–	–	–	–	–	–	–	–	–	–	9	–	–	–
Turkmenistan	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Tuvalu	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–
Uganda	130,000	120,000	150,000	82,000	44,000	120,000	–	–	42,000	23,000	60,000	13,413	32	23	59
Ukraine	–	–	–	2,600	1,200	4,100	2,817	>95	–	<500	1,600	1,256	–	80	>95
United Arab Emirates	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
United Republic of Tanzania	140,000	130,000	150,000	– m	40,000	130,000	–	–	40,000	20,000	66,000	12,822	32	20	65
Uruguay	–	–	–	– m	–	–	70 i	–	– g	–	–	160	–	–	–
Uzbekistan	–	–	–	<500	<200	<1,000	–	–	–	<100	<200	225	–	>95	>95
Vanuatu	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–
Venezuela (Bolivarian Republic of)	–	–	–	2,400	1,200	4,100	–	–	–	<1,000	2,400	611	–	25	84
Viet Nam	–	–	–	3,300	1,600	5,100	–	–	–	<1,000	2,500	1,462	–	58	>95
Yemen	–	–	–	–	–	–	1	–	–	–	–	9	–	–	–
Zambia	95,000	86,000	110,000	70,000	38,000	96,000	19,040	27	34,000	18,000	47,000	18,040	53	38	>95
Zimbabwe	120,000	110,000	140,000	53,000	29,000	73,000	9,816	19	37,000	22,000	50,000	13,254	36	27	60
SUMMARY INDICATORS															
Africa	1,800,000 b/	1,000,000 b/	2,600,000 b/	1,290,000	1,000,000	1,600,000	101,807	–	650,000	510,000	780,000	225,300	35	29	44
Sub-Saharan Africa	1,800,000 b/	1,000,000 b/	2,500,000 b/	1,300,000	1,000,000	1,600,000	101,788	–	650,000	510,000	780,000	225,100	35	29	44
Eastern and Southern Africa	1,300,000 b/	770,000 b/	1,800,000 b/	900,000	680,000	1,100,000	77,569	–	440,000	340,000	540,000	195,100	44	36	57
West and Central Africa	520,000 b/	280,000 b/	760,000 b/	380,000	260,000	510,000	24,112	–	200,000	140,000	260,000	29,800	15	11	22
Middle East and North Africa	18,000 b/	12,000 b/	25,000 b/	15,000	8,300	24,000	151	–	7,600	4,100	12,000	<500	6	4	11
Asia	160,000 b/	100,000 b/	220,000 b/	82,000	52,000	120,000	2,536	–	57,000	41,000	77,000	30,000	53	39	74
South Asia	99,000 b/	49,000 b/	150,000 b/	52,000	28,000	86,000	1,274	–	31,000	18,000	48,000	13,400	43	28	76
East Asia and the Pacific	61,000 b/	40,000 b/	90,000 b/	30,000	18,000	46,000	1,262	–	26,000	20,000	34,000	16,600	65	49	82
Latin America and the Caribbean	42,000 b/	31,000 b/	53,000 b/	32,000	24,000	41,000	3,311	–	21,000	18,000	25,000	16,100	76	65	91
CEE/CIS	20,000 b/	11,000 b/	28,000 b/	13,200	7,900	19,000	3,231	–	4,900	2,700	7,500	4,100	82	54	>95
Low- and middle-income countries	–	–	–	1,400,000	1,100,000	1,700,000	110,910	8	730,000	580,000	880,000	275,700	38	31	47
Developing countries	2,000,000 b/	1,200,000 b/	2,800,000 b/	–	–	–	–	–	–	–	–	–	–	–	–
World	2,100,000 b/	1,200,000 b/	2,900,000 b/	–	–	–	–	–	–	–	–	–	–	–	–

DEFINITIONS OF THE INDICATORS

Estimated number of children living with HIV: Estimated number of children (0–14 years old) living with HIV as of 2007.

Estimated number of HIV-positive pregnant women: Estimated number of pregnant women (15–49 years old) living with HIV as of 2008.

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

Percentage of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis: Calculated by dividing the number of HIV-exposed infants started on cotrimoxazole prophylaxis by the estimated number of children born to HIV-positive pregnant women, assuming a ratio of one child to one HIV-positive mother. The denominator is the estimated number of HIV-positive pregnant women.

Estimated number of children living with HIV in need of ART: Estimated number of children (0-14 years old) living with HIV in need of antiretroviral treatment (ART) as of 2008.

Number of children receiving ART: Reported number of children (0–14 years old) living with HIV receiving ART as of 2008.

Percentage of children in need receiving ART: Calculated by dividing the number of children receiving ART by the estimated number of children in need of ART.

MAIN DATA SOURCES

Estimated number of children living with HIV: UNAIDS, *2008 Report on the Global AIDS Epidemic.*

Estimated number of HIV-positive pregnant women: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Number of infants born to HIV-positive pregnant women started on cotrimoxazole prophylaxis: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

MAIN DATA SOURCES, CONTINUED

Percentage of infants born to HIV-positive women started on cotrimoxazole prophylaxis: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Estimated number of children living with HIV in need of ART: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Number of children receiving ART: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

Percentage of children in need receiving ART: WHO, UNAIDS and UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2009.*

NOTES

– Data not available.

* The most recent data available are from WHO/UNAIDS/UNICEF, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector – Progress Report 2008.*

** United Nations General Assembly Special Session on HIV/AIDS (2001) indicator, as part of men and women with advanced HIV infection receiving antiretroviral combination therapy.

c The needs estimates are based on the methods described in the explanatory notes to the annexes. The estimates for individual countries may differ according to the local methods used.

d The coverage estimates are based on the estimated unrounded numbers of children receiving antiretroviral therapy and the estimated unrounded need for antiretroviral therapy (based on UNAIDS/WHO methods). The ranges in coverage estimates are based on plausibility bounds in the denominator: that is, low and high estimates of need. Point estimates and ranges are given for countries with a generalized epidemic, whereas only ranges are given for countries with a low or concentrated epidemic.

f This strategy is in the early stages of implementation and some sites are not yet collecting significant data.

g Estimates of the number of children needing antiretroviral therapy are currently being reviewed and will be adjusted, as appropriate, based on ongoing data collection and analysis. Therefore, some countries have requested only a range to be published or no needs at all.

h The latest reported data are to December 2007.

i The latest reported data are to December 2006.

l The latest reported data are to September 2007.

m Estimates of the number of pregnant women living with HIV needing antiretrovirals to prevent mother-to-child transmission are currently being reviewed and will be adjusted, as appropriate, based on ongoing data collection and analysis. Therefore, some countries have requested only a range to be published or no needs at all.

p Cotrimoxazole prophylaxis is given to mothers upon delivery with instructions to be administered when the baby is two months old.

q Data are incomplete. This strategy is in the early stages of implementation and some sites are not yet collecting significant data.

r Data are not available due to lack of age-disaggregated data; however, cotrimoxazole prophylaxis is routinely provided to HIV-exposed newborns.

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.

‡ The data are from three of four paediatric care clinics.

b/ Regional average estimates are for 2008 and are based on updates to the *2009 AIDS Epidemic Update* (forthcoming at the time this report went to press). Revised country estimates will be forthcoming in 2010. Regional averages are calculated for only the population representing 50 per cent or more of the region's total population of interest.

GOAL 3. Preventing infection among adolescents and young people

	HIV prevalence among young people (15–24 years old), 2007 **		Knowledge and behaviours							
			% of young people (15–24 years old) who have comprehensive knowledge of HIV (2003–2008*)**		% of young people (15–24 years old) who had sex with more than one partner in the last 12 months (2003–2008*)**		% of young people (15–24 years old) with multiple partners and who used a condom at last sex (2003–2008*)**		% of young people (15–19 years old) who had sex before age 15 (2003–2008*)**	
	Male (%)	Female (%)	Male	Female	Male	Female	Male	Female	Male	Female
Afghanistan	–	–	–	–	–	–	–	–	–	–
Albania	–	–	–	6	–	–	–	–	–	–
Algeria	0.1	0.1	–	13	–	–	–	–	–	–
Angola	0.2	0.3	–	–	–	–	–	–	–	–
Antigua and Barbuda	–	–	–	–	–	–	–	–	–	–
Argentina	0.6	0.3	–	–	–	–	–	–	–	–
Armenia	0.2	0.1	15	23	13	0	79	–	3	<1
Azerbaijan	0.3	0.1	5	5	9	0	29	–	1	<1
Bahamas	3.2	1.5	–	–	–	–	–	–	–	–
Bahrain	–	–	–	–	–	–	–	–	–	–
Bangladesh	–	–	18	8	–	–	–	–	–	–
Barbados	1.3	0.6	–	–	–	–	–	–	–	–
Belarus	0.3	0.1	–	34	–	–	–	–	–	–
Belize	0.5	1.5	–	40	–	1	–	–	–	–
Benin	0.3	0.9	35	16	10	1	45	27	13	13
Bhutan	0.1	<0.1	–	–	–	–	–	–	–	–
Bolivia (Plurinational State of)	0.2	0.1	18	15	19	1	–	–	15	6
Bosnia and Herzegovina	–	–	–	44	–	–	–	–	–	1
Botswana	5.1	15.3	–	–	–	–	–	–	–	–
Brazil	1.0	0.6	–	–	–	–	–	–	–	33
Brunei Darussalam	–	–	–	–	–	–	–	–	–	–
Bulgaria	–	–	15	17	–	–	–	–	–	–
Burkina Faso	0.5	0.9	–	19	–	1	–	71 x	–	6
Burundi	0.4	1.3	–	30	–	1	–	–	–	3
Cambodia	0.8	0.3	45	50	5	0	75	–	<1	1
Cameroon	1.2	4.3	–	32	–	5	–	68	–	13
Cape Verde	–	–	36	36	33	4	80	64	46	21
Central African Republic	1.1	5.5	27	17	21	6	73	59	12	29
Chad	2.0	2.8	20	8	12	1	26	9	11	19
Chile	0.3	0.2	–	–	–	–	–	–	–	–
China	0.1	0.1	–	–	–	–	–	–	–	–
Colombia	0.7	0.3	–	–	–	5	–	36	–	14
Comoros	0.1	<0.1	–	–	–	–	–	–	–	–
Congo	0.8	2.3	35	26	20	10	37	22	25	24
Cook Islands	–	–	–	–	–	–	–	–	–	–
Costa Rica	0.4	0.2	–	–	–	–	–	–	–	–
Côte d'Ivoire	0.8	2.4	28	18	20	5	62	45	17	20
Croatia	–	–	–	–	–	–	–	–	–	–
Cuba	0.1	0.1	–	52	–	–	–	–	–	–
Democratic People's Republic of Korea	–	–	–	–	–	–	–	–	–	–
Democratic Republic of the Congo	–	–	21	15	14	3	22	9	18	18
Djibouti	0.7	2.1	–	18	–	–	–	–	–	–
Dominica	–	–	–	–	–	–	–	–	–	–
Dominican Republic	0.3	0.6	34	41	23	5	62	34	21	14
Ecuador	0.4	0.2	–	–	–	–	–	–	–	–
Egypt	–	–	18	5	–	–	–	–	–	–
El Salvador	0.9	0.5	–	27	–	–	–	–	–	–
Equatorial Guinea	0.8	2.5	–	–	–	–	–	–	–	–
Eritrea	0.3	0.9	–	–	–	–	–	–	–	–
Ethiopia	0.5	1.5	33	20	1	<1	–	–	2	11
Fiji	0.1	–	–	–	–	–	–	–	–	–
Gabon	1.3	3.9	–	–	–	–	–	–	–	–
Gambia	0.2	0.6	–	39	–	1	–	64 x	–	4
Georgia	0.1	0.1	–	15	–	–	–	–	–	–
Ghana	0.4	1.3	33	25	6	2	61 x	43 x	5	7
Grenada	–	–	–	–	–	–	–	–	–	–
Guatemala	–	1.5	–	–	–	–	–	–	–	–
Guinea	0.4	1.2	23	17	19	2	39	28	18	20
Guinea-Bissau	0.4	1.2	–	18	–	6	–	58	–	22
Guyana	0.5	1.7	–	50	9	2	62	–	11	8
Haiti	0.6	1.4	40	34	20	2	51	23	42	15
Honduras	0.7	0.4	–	30	–	1	–	27	–	10
India	0.3	0.3	36	20	2	<1	32	17 x	3	8

GOAL 3. Preventing infection among adolescents and young people

	HIV prevalence among young people (15–24 years old), 2007 **		Knowledge and behaviours							
			% of young people (15–24 years old) who have comprehensive knowledge of HIV (2003–2008*)**		% of young people (15–24 years old) who had sex with more than one partner in the last 12 months (2003–2008*)**		% of young people (15–24 years old) with multiple partners and who used a condom at last sex (2003–2008*)**		% of young people (15–19 years old) who had sex before age 15 (2003–2008*)**	
	Male (%)	Female (%)	Male	Female	Male	Female	Male	Female	Male	Female
Indonesia	0.3	0.1	15 y	10 y	–	–	–	–	–	–
Iran (Islamic Republic of)	0.2	0.1	–	–	–	–	–	–	–	–
Iraq	–	–	–	3	–	–	–	–	–	–
Jamaica	1.7	0.9	–	60	–	–	–	–	–	–
Jordan	–	–	–	13 y	–	–	–	–	–	–
Kazakhstan	0.2	0.1	–	22	–	–	–	–	–	–
Kenya	–	–	47	34	11	2	52	9	31	15
Kiribati	–	–	–	–	–	–	–	–	–	–
Kuwait	–	–	–	–	–	–	–	–	–	–
Kyrgyzstan	0.2	0.1	–	20	–	1	–	–	–	<1
Lao People's Democratic Republic	0.2	0.1	–	–	–	–	–	–	–	–
Lebanon	0.1	0.1	–	–	–	–	–	–	–	–
Lesotho	5.9	14.9	18	26	18	5	51	31	18	7
Liberia	0.4	1.3	27	21	15	7	28	16	9	19
Libyan Arab Jamahiriya	–	–	–	–	–	–	–	–	–	–
Madagascar	0.2	0.1	16	19	19	3	13	2	8	16
Malawi	2.4	8.4	42	42	6	1	46	48	16	14
Malaysia	0.6	0.3	–	–	–	–	–	–	–	–
Maldives	–	–	–	–	–	–	–	–	–	–
Mali	0.4	1.1	22	18	6	2	28	8	6	24
Marshall Islands	–	–	39	27	10	5	23 x	9 x	25	15
Mauritania	0.9	0.5	14	5	–	–	–	–	–	–
Mauritius	1.8	1.0	–	–	–	–	–	–	–	–
Mexico	0.3	0.2	–	–	–	–	–	–	11	17
Micronesia (Federated States of)	–	–	–	–	–	–	–	–	–	–
Mongolia	0.1	–	–	31	–	–	–	–	–	–
Montenegro	–	–	–	30	–	<1	–	–	–	<1
Morocco	0.1	0.1	–	12	–	–	–	–	–	–
Mozambique	2.9	8.5	–	14	–	5	30	20	–	29
Myanmar	0.7	0.6	–	–	–	–	–	–	–	–
Namibia	3.4	10.3	62	65	11	2	82	74	19	7
Nauru	–	–	–	–	–	–	–	–	–	–
Nepal	0.5	0.3	44	28	2	<1	59 x	–	3	6
Nicaragua	0.3	0.1	–	–	–	–	–	–	–	13
Niger	0.9	0.5	16	13	2	<1	42 x	–	5	26
Nigeria	0.8	2.3	21	18	8	2	38	17	8	20
Niue	–	–	–	–	–	–	–	–	–	–
Occupied Palestinian Territory	–	–	–	–	–	–	–	–	–	–
Oman	–	–	–	–	–	–	–	–	–	–
Pakistan	0.1	0.1	–	3	–	–	–	–	–	–
Palau	–	–	–	–	–	–	–	–	–	–
Panama	1.1	0.6	–	–	–	–	–	–	–	–
Papua New Guinea	0.6	0.7	–	–	–	–	–	–	4	4
Paraguay	0.7	0.3	–	–	–	7	–	51	–	7
Peru	0.5	0.3	–	19	–	1	–	38 x	–	5
Philippines	–	–	18	12	6	–	30	–	3	1
Qatar	–	–	–	–	–	–	–	–	–	–
Republic of Korea	<0.1	<0.1	–	–	–	–	–	–	–	–
Republic of Moldova	0.4	0.2	39 y	42 y	17	2	60	30	9	1
Romania	0.2	0.2	1 y	3 y	–	–	–	–	–	–
Russian Federation	1.3	0.6	–	–	–	–	–	–	–	–
Rwanda	0.5	1.4	54	51	1	<1	–	–	15	5
Saint Kitts and Nevis	–	–	–	–	–	–	–	–	–	–
Saint Lucia	–	–	–	–	–	–	–	–	–	–
Saint Vincent and the Grenadines	–	–	–	–	–	–	–	–	–	–
Samoa	–	–	–	–	–	–	–	–	–	–
Sao Tome and Principe	–	–	–	44	–	2	–	57 x	–	9
Saudi Arabia	–	–	–	–	–	–	–	–	–	–
Senegal	0.3	0.8	24	19	6	1	64	33	13	9
Serbia	0.1	0.1	–	42	–	2	–	80 x	–	1
Seychelles	–	–	–	–	–	–	–	–	–	–
Sierra Leone	0.4	1.3	–	17	–	4	–	27	–	25
Singapore	0.2	0.1	–	–	–	–	–	–	–	–

GOAL 3. Preventing infection among adolescents and young people

	HIV prevalence among young people (15–24 years old), 2007 **		Knowledge and behaviours							
			% of young people (15–24 years old) who have comprehensive knowledge of HIV (2003–2008*)**		% of young people (15–24 years old) who had sex with more than one partner in the last 12 months (2003–2008*)**		% of young people (15–24 years old) with multiple partners and who used a condom at last sex (2003–2008*)**		% of young people (15–19 years old) who had sex before age 15 (2003–2008*)**	
	Male (%)	Female (%)	Male	Female	Male	Female	Male	Female	Male	Female
Solomon Islands	–	–	–	–	–	–	–	–	–	–
Somalia	0.6	0.3	–	4	–	–	–	–	–	–
South Africa	4.0	12.7	–	–	16	3	11	2	12	7
Sri Lanka	<0.1	–	–	–	–	–	–	–	–	–
Sudan	0.3	1.0	–	–	–	–	–	–	–	–
Suriname	2.7	1.4	–	41	–	3	–	80	–	9
Swaziland	5.8	22.6	52	52	10	2	67	51 x	5	7
Syrian Arab Republic	–	–	–	7	–	–	–	–	–	–
Tajikistan	0.4	0.1	–	2	–	–	–	–	–	–
Thailand	1.2	1.2	–	46	–	–	–	–	–	–
The former Yugoslav Republic of Macedonia	–	–	–	27	–	1	–	36 x	–	1
Timor-Leste	–	–	–	–	–	–	–	–	–	–
Togo	0.8	2.4	–	15	–	3	–	50	–	12
Tonga	–	–	–	–	–	–	–	–	–	–
Trinidad and Tobago	0.3	1.0	–	54	–	3	–	67	–	5
Tunisia	0.1	<0.1	–	–	–	–	–	–	–	–
Turkey	–	–	–	–	–	–	–	–	–	–
Turkmenistan	–	–	–	5	–	–	–	–	–	–
Tuvalu	–	–	–	–	–	–	–	–	–	–
Uganda	1.3	3.9	38	32	9	2	45	39	14	12
Ukraine	1.5	1.5	43	45	16	3	64	63	3	1
United Arab Emirates	–	–	–	–	–	–	–	–	–	–
United Republic of Tanzania	0.5	0.9	42	39	9	3	37	–	11	11
Uruguay	0.6	0.3	–	–	–	–	–	–	–	–
Uzbekistan	0.1	0.1	–	31	–	<1	–	–	–	–
Vanuatu	–	–	–	15	–	–	–	–	–	–
Venezuela (Bolivarian Republic of)	–	–	–	–	–	–	–	–	–	–
Viet Nam	0.6	0.3	–	44	<1	0	–	–	0.3	1
Yemen	–	–	–	2 y	–	–	–	–	–	–
Zambia	3.6	11.3	37	34	9	2	43	42 x	16	12
Zimbabwe	2.9	7.7	46	44	7	1	59	38 x	5	5
SUMMARY INDICATORS†										
Africa	1.1 b/	2.5 b/	28	21	9	2	37	21	11	15
Sub-Saharan Africa	1.1 b/	2.6 b/	30	23	9	2	37	21	11	15
Eastern and Southern Africa	1.8 b/	4.2 b/	38	29	8	2	36	–	12	12
West and Central Africa	1.0 b/	2.3 b/	23	18	10	3	37	22	11	18
Middle East and North Africa	0.2 b/	0.4 b/	–	7	–	–	–	–	–	–
Asia	0.1 b/	0.1 b/	31 ‡	18 ‡	2 ‡	0 ‡	33 ‡	–	3 ‡	7 ‡
South Asia	0.1 b/	0.1 b/	34	17	2	0	32	–	3	8
East Asia and the Pacific	0.1 b/	<0.1 b/	17 ‡	22 ‡	–	–	–	–	–	–
Latin America and the Caribbean	0.4 b/	0.3 b/	–	–	–	–	–	–	–	22
CEE/CIS	0.2 b/	0.2 b/	–	–	–	–	–	–	–	–
Low- and middle-income countries	–	–	–	–	–	–	–	–	–	–
Developing countries	0.3 b/	0.6 b/	30 ‡	19 ‡	5 ‡	1 ‡	–	–	6 ‡	12 ‡
World	0.3 b/	0.5 b/	–	–	–	–	–	–	–	–

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-2007.

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.

Sex with more than one partner in the last 12 months: Percentage of young men and women (15–24 years old) who have had sexual intercourse with more than one partner in the last 12 months.

Condom use with multiple partners: Percentage of young men and women (15–24 years old) who had more than one partner in the past 12 months reporting the use of a condom during their last sexual intercourse.

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: UNAIDS, *2008 Report on the Global AIDS Epidemic.*

Comprehensive knowledge of HIV: UNICEF global databases, 2009.

Sex with more than one partner in the last 12 months: UNICEF global databases, 2009.

Condom use with multiple partners: UNICEF global databases, 2009.

Sex before age 15: UNICEF global databases, 2009.

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.

x Based on small denominators (typically 25–49 unweighted cases).

y 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. Such data are included in the calculation of regional and global averages.

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

‡ Excluding China.

b/ Regional average estimates are for 2008 and are based on updates to the *2009 AIDS Epidemic Update* (forthcoming at the time this report went to press). Revised country estimates will be forthcoming in 2010.

GOAL 4. Protecting and supporting children affected by HIV and AIDS

	Orphaned and vulnerable children								
	Children who have lost one or both parents due to all causes, 2007	Children who have lost one or both parents due to AIDS, 2007			Children whose mother has died due to any cause, 2007	Children whose father has died due to any cause, 2007	Children both of whose parents have died due to any cause, 2007	Orphan school attendance ratio (2003–2008*)**	% of children whose households received external support (2003–2008*)**
		Estimate	Low estimate	High estimate					
Afghanistan	2,100,000	–	–	–	1,100,000	1,400,000	370,000	–	–
Albania	–	–	–	–	–	–	–	–	–
Algeria	570,000	–	–	–	220,000	370,000	26,000	–	–
Angola	1,200,000	50,000	20,000	260,000	600,000	840,000	210,000	–	–
Antigua and Barbuda	–	–	–	–	–	–	–	–	–
Argentina	610,000	–	–	–	93,000	530,000	15,000	–	–
Armenia	50,000	–	–	–	8,400	43,000	1,900	–	–
Azerbaijan	190,000	–	–	–	42,000	160,000	9,100	–	–
Bahamas	6,600	–	–	–	1,200	5,700	<500	–	–
Bahrain	–	–	–	–	–	–	–	–	–
Bangladesh	5,000,000	–	–	–	2,000,000	3,400,000	380,000	0.84	–
Barbados	2,700	–	–	–	<500	2,300	<100	–	–
Belarus	190,000	–	–	–	21,000	170,000	6,800	–	–
Belize	5,500	–	–	–	2,200	3,600	<500	–	–
Benin	340,000	29,000	22,000	40,000	140,000	220,000	26,000	0.90	–
Bhutan	22,000	–	–	–	8,200	15,000	1,800	–	–
Bolivia (Plurinational State of)	300,000	–	–	–	110,000	220,000	20,000	0.74 p	–
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	–
Botswana	130,000	95,000	81,000	110,000	85,000	81,000	37,000	–	31
Brazil	3,200,000	–	–	–	720,000	2,600,000	110,000	–	–
Brunei Darussalam	–	–	–	–	–	–	–	–	–
Bulgaria	95,000	–	–	–	11,000	87,000	2,700	–	–
Burkina Faso	690,000	100,000	62,000	130,000	300,000	480,000	83,000	0.61 p	7
Burundi	600,000	120,000	100,000	150,000	320,000	390,000	120,000	0.85	–
Cambodia	600,000	–	–	–	240,000	420,000	55,000	0.83	–
Cameroon	1,100,000	300,000	230,000	390,000	580,000	710,000	190,000	0.91	9
Cape Verde	–	–	–	–	–	–	–	–	–
Central African Republic	280,000	72,000	58,000	86,000	140,000	190,000	51,000	0.96	7
Chad	540,000	85,000	42,000	270,000	250,000	350,000	61,000	1.05	–
Chile	160,000	–	–	–	25,000	140,000	2,700	–	–
China	17,000,000	–	–	–	4,000,000	14,000,000	560,000	–	–
Colombia	790,000	–	–	–	180,000	640,000	25,000	0.85	–
Comoros	27,000	<100	–	<200	11,000	18,000	1,900	–	–
Congo	210,000	69,000	57,000	84,000	100,000	140,000	31,000	0.88	–
Cook Islands	–	–	–	–	–	–	–	–	–
Costa Rica	36,000	–	–	–	6,400	31,000	<500	–	–
Côte d'Ivoire	1,200,000	420,000	320,000	530,000	590,000	800,000	180,000	0.83	9
Croatia	–	–	–	–	–	–	–	–	–
Cuba	99,000	–	–	–	19,000	82,000	2,100	–	–
Democratic People's Republic of Korea	530,000	–	–	–	150,000	410,000	29,000	–	–
Democratic Republic of the Congo	4,500,000	–	270,000	380,000	2,200,000	3,000,000	740,000	0.77	9
Djibouti	42,000	5,200	1,900	9,600	21,000	27,000	5,800	–	–
Dominica	–	–	–	–	–	–	–	–	–
Dominican Republic	170,000	–	–	–	50,000	120,000	6,600	0.77	–
Ecuador	200,000	–	–	–	46,000	160,000	5,400	–	–
Egypt	1,400,000	–	–	–	390,000	1,100,000	56,000	–	–
El Salvador	130,000	–	–	–	33,000	110,000	4,600	–	–
Equatorial Guinea	32,000	4,800	3,800	6,100	15,000	22,000	5,200	–	–
Eritrea	280,000	18,000	12,000	32,000	120,000	190,000	34,000	–	–
Ethiopia	5,000,000	650,000	540,000	780,000	2,400,000	3,200,000	630,000	0.90	–
Fiji	22,000	–	–	–	6,600	17,000	1,400	–	–
Gabon	67,000	18,000	11,000	28,000	31,000	44,000	8,400	–	–
Gambia	48,000	2,700	1,300	4,700	18,000	33,000	2,800	0.87	–
Georgia	72,000	–	–	–	11,000	65,000	2,700	–	–
Ghana	1,100,000	160,000	130,000	200,000	510,000	700,000	130,000	1.04 p	–
Grenada	–	–	–	–	–	–	–	–	–
Guatemala	360,000	–	–	–	96,000	280,000	16,000	–	–
Guinea	380,000	25,000	15,000	39,000	150,000	260,000	32,000	0.73	–
Guinea-Bissau	110,000	5,900	4,200	8,300	50,000	74,000	16,000	0.97	8
Guyana	23,000	–	–	–	8,100	17,000	2,200	–	13
Haiti	380,000	–	–	–	160,000	270,000	50,000	0.86	5
Honduras	170,000	–	–	–	47,000	130,000	6,700	1.08	–
India	25,000,000	–	–	–	7,400,000	19,000,000	1,200,000	0.72	–
Indonesia	4,400,000	–	–	–	1,400,000	3,200,000	230,000	0.82 y	–

GOAL 4. Protecting and supporting children affected by HIV and AIDS

	Orphaned and vulnerable children								
	Children who have lost one or both parents due to all causes, 2007	Children who have lost one or both parents due to AIDS, 2007			Children whose mother has died due to any cause, 2007	Children whose father has died due to any cause, 2007	Children both of whose parents have died due to any cause, 2007	Orphan school attendance ratio (2003–2008*)**	% of children whose households received external support (2003–2008*)**
		Estimate	Low estimate	High estimate					
Iran (Islamic Republic of)	1,300,000	–	–	–	420,000	910,000	58,000	–	–
Iraq	–	–	–	–	–	–	–	0.84	–
Jamaica	53,000	–	–	–	16,000	40,000	2,100	–	15
Jordan	–	–	–	–	–	–	–	–	–
Kazakhstan	470,000	–	–	–	90,000	410,000	31,000	–	–
Kenya	2,500,000	–	990,000	1,400,000	1,500,000	1,500,000	470,000	0.95	–
Kiribati	–	–	–	–	–	–	–	–	–
Kuwait	–	–	–	–	–	–	–	–	–
Kyrgyzstan	140,000	–	–	–	34,000	120,000	7,500	–	–
Lao People's Democratic Republic	210,000	–	–	–	90,000	140,000	17,000	–	–
Lebanon	71,000	–	–	–	22,000	52,000	2,900	–	–
Lesotho	160,000	110,000	93,000	120,000	100,000	110,000	49,000	0.95	–
Liberia	270,000	15,000	10,000	87,000	130,000	180,000	45,000	0.85	–
Libyan Arab Jamahiriya	–	–	–	–	–	–	–	–	–
Madagascar	840,000	3,400	2,100	6,000	360,000	560,000	75,000	0.75	–
Malawi	1,100,000	550,000	470,000	640,000	540,000	740,000	230,000	0.97	19
Malaysia	410,000	–	–	–	110,000	310,000	13,000	–	–
Maldives	8,800	–	–	–	3,900	5,500	<1,000	–	–
Mali	550,000	44,000	27,000	56,000	220,000	380,000	48,000	0.87	–
Marshall Islands	–	–	–	–	–	–	–	–	–
Mauritania	83,000	3,000	1,500	5,900	30,000	58,000	4,500	0.66 p	–
Mauritius	21,000	<500	–	<1,000	4,000	17,000	<1,000	–	–
Mexico	1,400,000	–	–	–	320,000	1,100,000	34,000	–	–
Micronesia (Federated States of)	–	–	–	–	–	–	–	–	–
Mongolia	64,000	–	–	–	19,000	49,000	4,000	0.96 p	–
Montenegro	–	–	–	–	–	–	–	–	–
Morocco	630,000	–	–	–	230,000	440,000	32,000	–	–
Mozambique	1,400,000	400,000	280,000	590,000	780,000	920,000	300,000	0.89	22
Myanmar	1,600,000	–	–	–	570,000	1,100,000	120,000	–	–
Namibia	110,000	66,000	50,000	85,000	63,000	65,000	17,000	1.00	17
Nauru	–	–	–	–	–	–	–	–	–
Nepal	990,000	–	–	–	440,000	640,000	95,000	–	–
Nicaragua	110,000	–	–	–	29,000	84,000	3,900	–	–
Niger	570,000	25,000	18,000	39,000	260,000	350,000	43,000	0.67	–
Nigeria	9,700,000	1,200,000	640,000	4,100,000	4,900,000	6,400,000	1,700,000	0.64 p	–
Niue	–	–	–	–	–	–	–	–	–
Occupied Palestinian Territory	–	–	–	–	–	–	–	–	–
Oman	–	–	–	–	–	–	–	–	–
Pakistan	3,900,000	–	–	–	1,400,000	2,700,000	200,000	–	–
Palau	–	–	–	–	–	–	–	–	–
Panama	48,000	–	–	–	10,000	39,000	1,200	–	–
Papua New Guinea	330,000	–	–	–	130,000	240,000	38,000	–	–
Paraguay	130,000	–	–	–	38,000	93,000	5,100	–	–
Peru	570,000	–	–	–	160,000	430,000	25,000	–	–
Philippines	1,800,000	–	–	–	600,000	1,300,000	81,000	–	–
Qatar	–	–	–	–	–	–	–	–	–
Republic of Korea	360,000	–	–	–	32,000	330,000	3,900	–	–
Republic of Moldova	74,000	–	–	–	13,000	64,000	3,600	–	–
Romania	300,000	–	–	–	44,000	270,000	11,000	–	–
Russian Federation	4,000,000	–	–	–	460,000	3,700,000	220,000	–	–
Rwanda	860,000	220,000	190,000	250,000	540,000	600,000	290,000	0.82	13
Saint Kitts and Nevis	–	–	–	–	–	–	–	–	–
Saint Lucia	–	–	–	–	–	–	–	–	–
Saint Vincent and the Grenadines	–	–	–	–	–	–	–	–	–
Samoa	–	–	–	–	–	–	–	–	–
Sao Tome and Principe	–	–	–	–	–	–	–	–	–
Saudi Arabia	–	–	–	–	–	–	–	–	–
Senegal	350,000	8,400	4,600	14,000	120,000	240,000	19,000	0.83	–
Serbia	130,000	–	–	–	21,000	110,000	4,100	–	–
Seychelles	–	–	–	–	–	–	–	–	–
Sierra Leone	350,000	16,000	6,400	26,000	160,000	250,000	53,000	0.83	1
Singapore	24,000	–	–	–	3,400	21,000	<500	–	–
Solomon Islands	–	–	–	–	–	–	–	–	–
Somalia	590,000	8,800	4,900	16,000	300,000	390,000	100,000	0.78	–

GOAL 4. Protecting and supporting children affected by HIV and AIDS

	Orphaned and vulnerable children								
	Children who have lost one or both parents due to all causes, 2007	Children who have lost one or both parents due to AIDS, 2007			Children whose mother has died due to any cause, 2007	Children whose father has died due to any cause, 2007	Children both of whose parents have died due to any cause, 2007	Orphan school attendance ratio (2003–2008*)**	% of children whose households received external support (2003–2008*)**
		Estimate	Low estimate	High estimate					
South Africa	2,500,000	1,400,000	1,100,000	1,800,000	1,400,000	1,600,000	510,000	–	–
Sri Lanka	330,000	–	–	–	70,000	270,000	12,000	–	–
Sudan	1,800,000	–	–	–	840,000	1,200,000	210,000	–	–
Suriname	8,900	–	–	–	2,400	6,800	<500	–	–
Swaziland	96,000	56,000	48,000	65,000	74,000	58,000	37,000	0.97	41
Syrian Arab Republic	–	–	–	–	–	–	–	–	–
Tajikistan	210,000	–	–	–	64,000	150,000	12,000	–	–
Thailand	1,300,000	–	–	–	300,000	1,000,000	58,000	0.93	21
The former Yugoslav Republic of Macedonia	–	–	–	–	–	–	–	–	–
Timor-Leste	48,000	–	–	–	19,000	32,000	3,800	–	–
Togo	260,000	68,000	50,000	91,000	110,000	170,000	23,000	0.94	6
Tonga	–	–	–	–	–	–	–	–	–
Trinidad and Tobago	20,000	–	–	–	5,800	16,000	<1,000	–	–
Tunisia	130,000	–	–	–	36,000	96,000	3,900	–	–
Turkey	–	–	–	–	–	–	–	–	–
Turkmenistan	–	–	–	–	–	–	–	–	–
Tuvalu	–	–	–	–	–	–	–	–	–
Uganda	2,500,000	1,200,000	1,100,000	1,400,000	1,500,000	1,700,000	620,000	0.96	11
Ukraine	1,000,000	–	–	–	110,000	930,000	41,000	0.98	–
United Arab Emirates	–	–	–	–	–	–	–	–	–
United Republic of Tanzania	2,600,000	970,000	850,000	1,100,000	1,400,000	1,700,000	490,000	0.97	7
Uruguay	46,000	–	–	–	6,200	41,000	1,000	–	–
Uzbekistan	690,000	–	–	–	170,000	550,000	32,000	–	–
Vanuatu	–	–	–	–	–	–	–	–	–
Venezuela (Bolivarian Republic of)	430,000	–	–	–	96,000	350,000	12,000	–	–
Viet Nam	1,500,000	–	–	–	460,000	1,000,000	57,000	–	–
Yemen	–	–	–	–	–	–	–	–	–
Zambia	1,100,000	600,000	530,000	660,000	740,000	780,000	390,000	0.93	16
Zimbabwe	1,300,000	1,000,000	920,000	1,100,000	960,000	900,000	600,000	0.95	31
SUMMARY INDICATORS†									
Africa	58,400,000 b/	14,200,000	11,500,000	17,200,000	26,000,000 b/	41,600,000 b/	– a/	0.83	–
Sub-Saharan Africa	55,300,000 b/	14,100,000	11,500,000	17,100,000	25,100,000 b/	39,200,000 b/	– a/	0.83	–
Eastern and Southern Africa	27,400,000 b/	9,700,000	8,300,000	11,500,000	13,100,000 b/	19,100,000 b/	– a/	0.91	–
West and Central Africa	25,900,000 b/	4,400,000	3,300,000	5,400,000	11,200,000 b/	18,600,000 b/	– a/	0.76	–
Middle East and North Africa	6,800,000 b/	–	–	–	2,200,000 b/	5,100,000 b/	– a/	–	–
Asia	82,400,000 b/	–	–	–	25,100,000 b/	64,300,000 b/	– a/	0.75	–
South Asia	50,000,000 b/	–	–	–	17,200,000 b/	37,200,000 b/	– a/	0.73	–
East Asia and the Pacific	31,300,000 b/	–	–	–	7,700,000 b/	25,400,000 b/	– a/	–	–
Latin America and the Caribbean	10,600,000 b/	–	–	–	2,300,000 b/	8,900,000 b/	– a/	–	–
CEE/CIS	6,400,000 b/	–	–	–	1,200,000 b/	5,600,000 b/	– a/	–	–
Low- and middle-income countries	–	–	–	–	–	–	–	–	–
Developing countries	150,000,000 b/	–	–	–	54,200,000 b/	116,000,000 b/	– a/	0.78	–
World	163,000,000 b/	17,500,000	14,600,000	20,900,000	55,300,000 b/	126,000,000 b/	– a/	–	–

DEFINITIONS OF THE INDICATORS

Children who have lost one or both parents due to all causes: Estimated number of children (0–17 years old) as of 2007 who have lost one or both parents to any cause.

Children who have lost one or both parents due to AIDS: Estimated number of children (0–17 years old) as of 2007 who have lost one or both parents to AIDS.

Children whose mother/father has died due to any cause: Estimated number of children (0–17 years old) as of 2007 who have lost their biological mother/father to any cause.

Children both of whose parents have died due to any cause: Estimated number of children (0–17 years old) as of 2007 who have lost both parents to any cause.

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 who live with at least one parent and who 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

Children who have lost one or both parents due to all causes: UNAIDS unpublished estimates, 2008.

Children who have lost one or both parents due to AIDS: UNAIDS, *2008 Report on the Global AIDS Epidemic.*

Children whose mother/father has died due to any cause: UNAIDS unpublished estimates, 2008.

Children both of whose parents have died due to any cause: UNAIDS unpublished estimates, 2008.

Orphan school attendance ratio: UNICEF global databases, 2009.

Percentage of children whose households received external support: UNICEF global databases, 2009.

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.

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

y Data refer to years or periods other than those specified in the column heading, differ from the standard definition or refer to only a part of the country. Such data are included in the calculation of regional and global averages.

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

a/ Regional average estimates for children both of whose parents have died due to any cause were not available at the time this report went to press.

b/ Regional average estimates are for 2008 and are based on updates to the *2009 AIDS Epidemic Update* (forthcoming at the time this report went to press). Revised country estimates will be forthcoming in 2010.

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