GLOBAL REPORT

UNAIDS report on the global AIDS epidemic 2013

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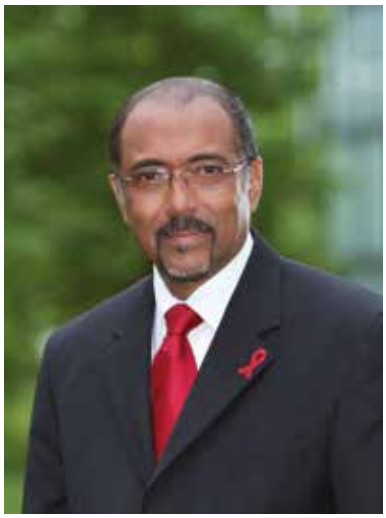
FOREWORD



Michel Sidibé
UNAIDS Executive Director

In 2000, the global community took an historic step in the United Nations Millennium Declaration by acknowledging the importance of an effective response to HIV/AIDS and by placing it in the context of the broader development agenda. Among the many health targets that were then established in the Millennium Development Goals (MDGs), MDG 6 calls for unprecedented action to halt and begin to reverse the AIDS epidemic. As the United Nations Member States implicitly recognized when they endorsed the Millennium Declaration, the persistent burden associated with communicable diseases undermines efforts to reduce poverty, prevent hunger and preserve human potential in the world's most resource-limited settings.

We are now less than two years from the deadline for the MDGs. Over the years, the gloom and disappointments chronicled in the early editions of the UNAIDS *Global report on the AIDS epidemic* have given way to more promising tidings, including historic declines in AIDS-related deaths and new HIV infections and the mobilisation of unprecedented financing for HIV-related activities in low- and middle-income countries. Yet AIDS remains an unfinished MDG, underscoring the need for continued and strengthened international solidarity and determination to address this most serious of contemporary health challenges.

When the Millennium Development Goals were established at the dawn of this century, a lack of critical HIV treatment and prevention tools often hindered efforts to respond effectively to the epidemic. As this latest *Global report* makes clear, today we have the tools we need to lay the groundwork to end the AIDS epidemic.

This report highlights continued progress towards the global vision of zero new HIV infections, zero discrimination and zero AIDS-related deaths. The annual number of new HIV infections continues to decline, with especially sharp reductions in the number of children newly infected with HIV. More people than ever are now receiving life-saving antiretroviral therapy, contributing to steady declines in the number of AIDS-related deaths and further buttressing efforts to prevent new infections.

These achievements reflect the synergistic efforts of diverse stakeholders – the leadership and commitment of national governments, the solidarity of the international community, innovation by programme implementers, the historic advances achieved by the scientific research community and the passionate engagement of civil society, most notably people living with HIV themselves. As a result of working together, many countries are now within reach of achieving several of the key targets outlined in the 2011 UN Political Declaration on HIV and AIDS, and they are thus making clear progress towards MDG 6.

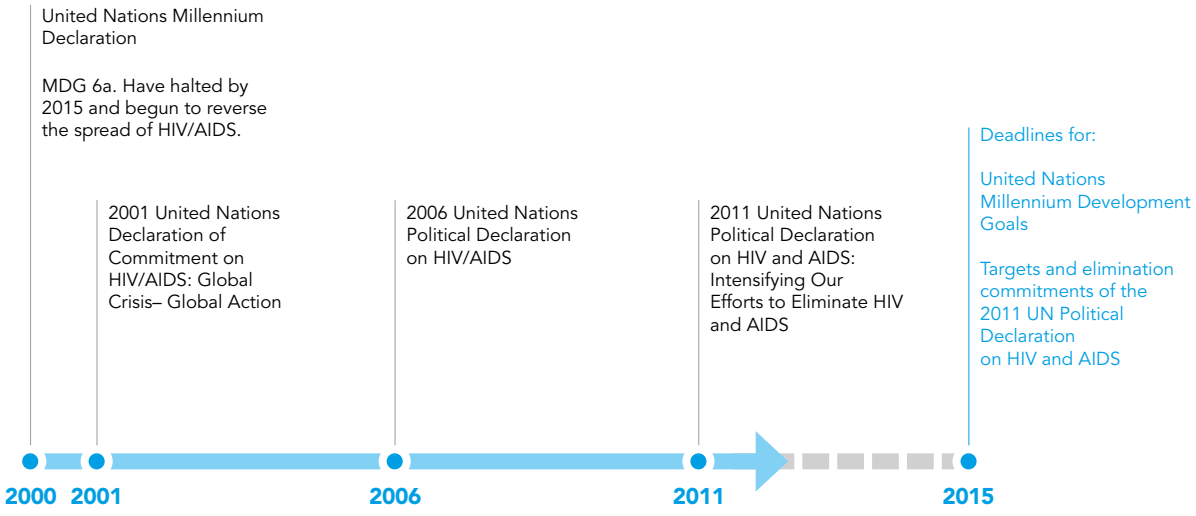
However, this report also includes notes of caution, as well as signs of stagnating progress towards other targets and elimination commitments in the 2011 UN Political Declaration. In several countries that have experienced significant declines in new HIV infections, disturbing signs have emerged of increases in sexual risk behaviours among

young people. Stigma and discrimination remain rife in many parts of the world, and punitive laws continue to deter those most at risk from seeking essential HIV services. Although total financial resources for HIV programmes in low- and middle-income countries rose modestly in 2012, our ability to lay the foundation for an end to the AIDS epidemic continues to be undermined by a major resource gap.

These challenges are real, and they must be taken seriously if countries are to achieve their AIDS targets. However, the enormous progress that this report describes highlights the undeniable fact that the AIDS response has encountered – and overcome – such challenges in the past.

As this report emerged, just over two years remain before we reach the deadline for targets and commitments made in the 2011 UN Political Declaration. It is my hope that countries will use the results summarised in this report – both the evidence of all that has been achieved, as well as proof of where countries are falling short – to redouble their determination to keep the commitments they have made. In addition to doing more, we also need to do better, improving the strategic focus of our work and enhancing the efficiency and effectiveness of our efforts.

In endorsing the 2011 UN Political Declaration, United Nations Member States aimed to outline a series of targets and elimination commitments that were ambitious and visionary. However, these targets remain achievable – if we recognize our shared responsibility for the AIDS response and put into practice the many lessons we have learned.



INTRODUCTION

When countries gathered in New York at the beginning of this century to articulate a new development agenda, one of the most momentous steps they took was to elevate health on the global development agenda. Acknowledging the historic impact of the AIDS epidemic, Millennium Development Goal 6 called for global efforts to halt and begin to reverse the epidemic, an objective that has helped inspire unprecedented action.

Through a series of high-level meetings, the United Nations General Assembly established strategies, goals and targets to give life to MDG 6 and to accelerate progress towards achieving those objectives by 2015. At the 2011 High-Level Meeting on HIV and AIDS, UN Member States reviewed a decade of historic progress in the HIV response. Determined to build on prior gains in reducing new HIV infections and AIDS-related deaths, and looking forwards to the eventual end of the AIDS epidemic, they endorsed the 2011 UN Political Declaration on HIV/AIDS, which set forth a series of ambitious targets and elimination commitments for 2015.

HISTORIC GAINS, CONTINUING CHALLENGES

As the 2015 deadline draws ever closer, this report summarizes progress towards the targets and elimination commitments established in the 2011 UN Political Declaration, which support achievement of MDG 6. Specifically, the report describes both gains and persistent challenges for 10 targets and commitments. The pledges made by countries in the 2011 UN Political Declaration include specific improvements in health outcomes (e.g. 50% reductions in both sexual and drug-related HIV and the transmission, elimination of new HIV infections among children); coverage and resource targets (e.g. reaching 15 million people with HIV treatment, mobilizing US$ 22–24 billion for HIV programmes); elimination targets (e.g. elimination of stigma and discrimination, gender inequalities and restrictions on entry, stay and residence); and steps to ensure the sustainability of the response (e.g. integrating HIV with other health and development efforts).

Globally, an estimated 35.3 (32.2–38.8) million people were living with HIV in 2012. An increase from previous years as more people are receiving the life-saving antiretroviral therapy. There were 2.3 (1.9–2.7) million new HIV infections globally, showing a 33% decline in the number of new infections from 3.4 (3.1–3.7) million in 2001. At the same time the number of AIDS deaths is also declining with 1.6 (1.4–1.9) million AIDS deaths in 2012, down from 2.3 (2.1–2.6) million in 2005 (see Figure A).

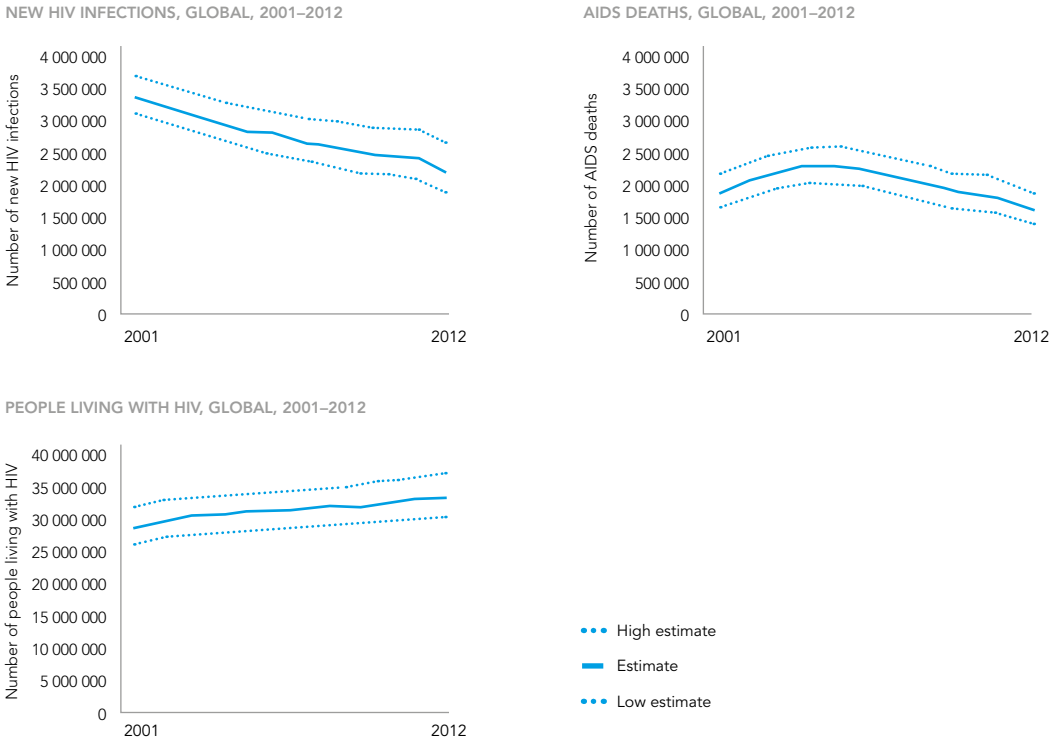
As this report reveals, striking gains have been made towards many of the 2015 targets and elimination commitments, although significant challenges remain.

1. Reduce sexual transmission of HIV by 50% by 2015

The annual number of new HIV infections among adults and adolescents decreased by 50% or more in 26 countries between 2001 and 2012. However, other countries are not on track to halve sexual HIV transmission, which underscores the importance of intensifying prevention efforts. Although trends in sexual behaviours in high-

FIGURE A

Numbers of people living with HIV, new HIV infections, and AIDS deaths, 2001-2012, globally



Source: UNAIDS 2012 estimates.

prevalence countries have generally been favourable over the last decade, recent surveys in several countries in sub-Saharan Africa have detected decreases in condom use and/or an increase in the number of sexual partners. Efforts to reduce transmission related to sex work and men who have sex with men remain insufficient, as evidence by recent trends in prevalence among these groups. However, prospects for strengthening prevention efforts have never been more promising, as a series of highly effective biomedical prevention tools have emerged in recent years to buttress the prevention benefits of behavioural and structural approaches. Momentum accelerated in 2012 towards the scale-up of one such biomedical intervention – voluntary medical male circumcision.

2. Halve the transmission of HIV among people who inject drugs by 2015

The world is not on track to reduce HIV transmission among people who inject drugs by 50%, as recent evidence suggests little change in the HIV burden in this population. HIV prevalence among people who inject drugs remains high – up to 28% in Asia. HIV prevention coverage for people who inject drugs remains low, with only two of 32 reporting countries providing the recommended minimum of at least 200 sterile syringes per year for each person who injects drugs. Among 35 countries providing data in 2013, all but four reached less than 10% of opiate users with

substitution therapy. In addition to exceptionally low coverage, an effective AIDS response among people who inject drugs is undermined by punitive policy frameworks and law enforcement practices, which discourage individuals from seeking the health and social services they need.

3. Eliminate HIV infections among children and reduce maternal deaths

As a result of sustained progress, the world has the potential to reach at least 90% of pregnant women living with HIV with antiretroviral interventions by 2015. Antiretroviral coverage among pregnant women living with HIV reached 62% in 2012, and the number of children newly infected with HIV in 2012 was 35% lower than in 2009. However, achieving the global goal of reducing the number of children newly infected by 2015 will require similar scale-up of other prevention strategies, including primary HIV prevention for women and access to contraception and other family planning services. However, substantially greater efforts are needed to link pregnant women and children to HIV treatment and care; pregnant women living with HIV are less likely than treatment-eligible adults overall to receive antiretroviral therapy, and treatment coverage among children living with HIV in 2012 was less than half the coverage for adults.

4. Reach 15 million people living with HIV with lifesaving antiretroviral treatment by 2015

The world is within reach of providing antiretroviral therapy to 15 million people by 2015. In 2012, 9.7 million people in low- and middle-income countries received antiretroviral therapy, representing 61% of all who were eligible under the 2010 World Health Organization (WHO) HIV treatment guidelines. However, under the 2013 WHO guidelines, the HIV treatment coverage in low- and middle-income countries represented only 34% (32-37%) of the 28.6 million people eligible in 2013. Antiretroviral therapy not only prevents AIDS-related illness and death: it also has the potential to significantly reduce the risk of HIV transmission and the spread of tuberculosis. From 1996 to 2012, antiretroviral therapy averted 6.6 million AIDS-related deaths worldwide, including 5.5 million deaths in low- and middle-income countries. But despite historic gains in expanding treatment services, efforts to reach universal treatment access face considerable challenges. In addition to persistent low treatment coverage for children, men are notably less likely than women worldwide to receive antiretroviral therapy, and key populations often experience major barriers to obtaining treatment and care services. Only relatively modest gains in treatment access have occurred in Eastern Europe and Central Asia and in North Africa and the Middle East, underscoring the need to extend recent coverage gains to all parts of the world.

5. Halve tuberculosis deaths among people living with HIV by 2015

As a result of sustained progress in meeting the needs of tuberculosis patients living with HIV, the world is within reach of achieving the 2015 target of reducing by 50% tuberculosis-related deaths among people living with HIV. Since 2004, tuberculosis-related deaths among people living with HIV have declined by 36% worldwide and slightly less in Africa, home to 75% of all people living with tuberculosis and HIV. WHO estimates that the scale-up of collaborative HIV/TB activities (including HIV testing, antiretroviral therapy and recommended preventive measures) prevented 1.3 million people from dying from 2005 to 2012. However, challenges persist, as progress

in reducing tuberculosis-related deaths among people living with HIV has slowed in recent years. While antiretroviral therapy reduces the risk that a person living with HIV will develop tuberculosis, inadequate use is currently being made of this life-saving tool; among the 10 reporting countries with the largest number of HIV/TB patients, only two (Kenya and Malawi) were delivering antiretroviral therapy in 2012 to more than 50% of HIV-positive TB patients, while the pace of treatment scale-up for HIV/TB patients has slowed. Less than half (46%) of notified tuberculosis patients were tested for HIV in 2012, and the number of people with HIV/TB co-infection receiving isoniazid preventive therapy (500 000) represented a mere fraction of those who could benefit from the intervention.

6. Close the global AIDS resource gap

Continued gains were made in mobilizing financial resources for the AIDS response in 2012, although AIDS expenditures remain short of the global target of US$ 22-24 billion in annual financial resources. In 2012, an estimated US$ 18.9 billion were available for HIV programmes in low- and middle-income countries – a 10% increase over 2011. Although international HIV assistance remained flat in real terms in 2012, many low- and middle-income countries have increased financial outlays for HIV; domestic spending accounted for 53% of all HIV-related spending in 2012. Although increases in domestic investments have occurred among countries at all income levels, spending has risen most sharply among upper middle-income countries, with many lower middle-income and low-income countries remaining heavily dependent on international assistance. In 2012, 51 countries looked to international sources for more than 75% of HIV-related spending. Whereas domestic resources account for the majority of spending for treatment and care, international spending financed the majority of prevention efforts. In an effort to promote long-term sustainability of national responses, a growing number of countries are exploring innovative financing methods, including dedicated tax levies and AIDS trust funds.

7. Eliminate gender inequalities and gender-based abuse and violence and increase the capacity of women and girls to protect themselves from HIV

Gender inequalities and harmful gender norms continue to contribute to HIV-related vulnerability. As one manifestation of the role of gender issues in national epidemics, a recent review found that women who have experienced intimate partner violence are 50% more likely to be living with HIV. Nearly all countries (92%) that conducted mid-term reviews of their national AIDS response acknowledged the central importance of addressing gender inequalities. However, mid-term reviews indicate that less than half of countries allocate funds for women's organizations, broadly integrate HIV and sexual and reproductive health services, or have scaled-up initiative to engage men and boys in national responses.

8. Eliminate HIV-related stigma, discrimination, punitive laws and practices

HIV-related stigma and discrimination persist as major obstacles to an effective HIV response in all parts of the world, with national surveys finding that discriminatory treatment of people living with HIV remains common in multiple facets of life, including access to health care. In 2012, 61% of countries reported the existence of anti-discrimination laws that protect people living with HIV. The proportion of countries reporting the existence of HIV-related legal services increased from 45%

in 2008 to 55% in 2012, but the frequent lack of accessible legal services means that many instances of HIV-related discrimination are never addressed. As of 2013, 63 countries have in at least one jurisdiction specific provisions that allow for the prosecution of HIV non-disclosure, exposure and/or transmission. Criminalisation of key populations also remains widespread, and 60% of countries report having laws, regulations or policies which present obstacles to effective HIV prevention, treatment, care and support for key populations and vulnerable groups.

9. Eliminate HIV-related restrictions on entry, stay and residence

Since 2010, eight countries, territories or areas have eliminated restrictions on entry, stay and residence for people living with HIV. However, eliminating the remaining HIV-related restrictions on freedom of movement will require intensified action to remove such counterproductive and discriminatory laws that remain in force in 44 countries. Removing HIV-related restrictions to entry, stay and residence is a priority for both symbolic and practical reasons. In addition to reflecting and reinforcing the stigma and discrimination that impedes an effective AIDS response, such restrictions also impose severe hardship on many people living with HIV. Increasingly, business leaders are encouraging countries to repeal HIV-related travel restrictions on economic grounds, arguing that in a globalized world companies require flexibility to recruit and deploy workers where they are most needed.

10. Strengthen HIV integration

Although a clear trend towards integration of HIV with diverse systems and sectors is apparent, greater efforts are needed to eliminate parallel structures and systems and to ensure integration of HIV in broad health and development efforts. Nearly all countries (90%) recognize integration as a core HIV priority, 82% address integration in their national strategic plans and 45% report that HIV has been aligned with other disease-specific planning. More than half (53%) of countries have either fully integrated HIV and tuberculosis services or strengthened joint service provision, 70% of countries have integrated services to prevent mother-to-child HIV transmission in antenatal care, and two-thirds have integrated HIV and sexual and reproductive health services. Nearly one in four (23%) countries have linked HIV and management of chronic non-communicable diseases, and more than half have integrated HIV testing and counselling and/or antiretroviral therapy in general outpatient care.

GLOBAL AIDS RESPONSE PROGRESS REPORTING AND HIV ESTIMATES

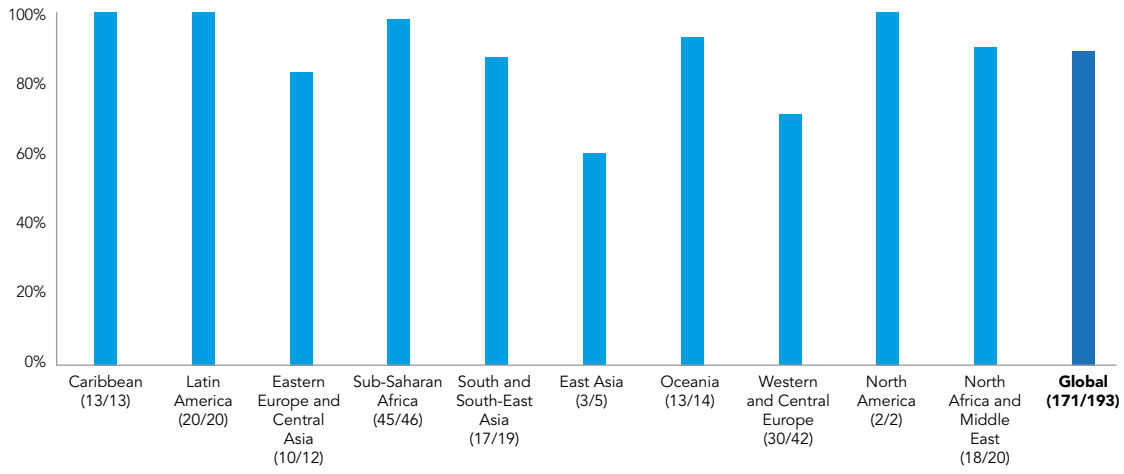
This report draws on an unprecedented body of data and analysis. It is primarily based on three sources: epidemiological estimates, Global AIDS Response Progress Reporting (GARPR) 2013 and the national mid-term reviews conducted in 2013 of progress towards the targets and elimination commitments for 2015 that were established in the 2011 UN Political Declaration. GARPR and the model-derived HIV estimates provide the sources for information on quantifiable progress towards the 10 targets and elimination commitments. Beginning this year and continuing until 2015, countries are now reporting annually, rather than biennially, on progress in their national response. The move to annual reporting reflects the urgency of intensified accountability and accelerated action as the 2015 deadline approaches.

In 2013, 172 countries submitted GARPR reports on progress towards core HIV indicators (see Figure B). Of these 172 countries, 12 (11 from Western and Central Europe and one from Oceania) requested that UNAIDS use data submitted in 2012. As countries become accustomed to annual rather than biennial reporting, UNAIDS anticipates that the number of countries submitting up-to-date, annual progress reports will again reach the 186 that reported in 2012.

The HIV estimates are developed by country teams using Spectrum, a standard software developed by the Futures Institute and supported by UNAIDS and partners. In 2013, Spectrum files were available for 155 countries globally.

FIGURE B

Proportion of countries that participated in the 2013 Global AIDS Response Progress Reporting (GARPR), by region



Source: GARPR 2013.

Note: Countries reporting / total number of UN Member States in the region.

MID-TERM REVIEWS OF TARGETS AND ELIMINATION COMMITMENTS

To provide qualitative assessments of progress towards the targets and commitments in the 2011 UN Political Declaration and to identify priority actions in moving forward, UNAIDS encouraged countries to conduct mid-term progress reviews. For each of the 10 targets and commitments, countries were asked to specify national priorities and objectives, summarize achievements to date and identify gaps. With the aim of expediting progress in the time remaining before expiration of the 2015 targets, countries were requested to identify opportunities for innovation and more efficient service delivery. They were also asked about their plans for increasing domestic investment, accelerating action to respond to lags in progress and options for sustaining progress on the 10 targets beyond 2015. Mid-term reviews were intended to consist of a formal

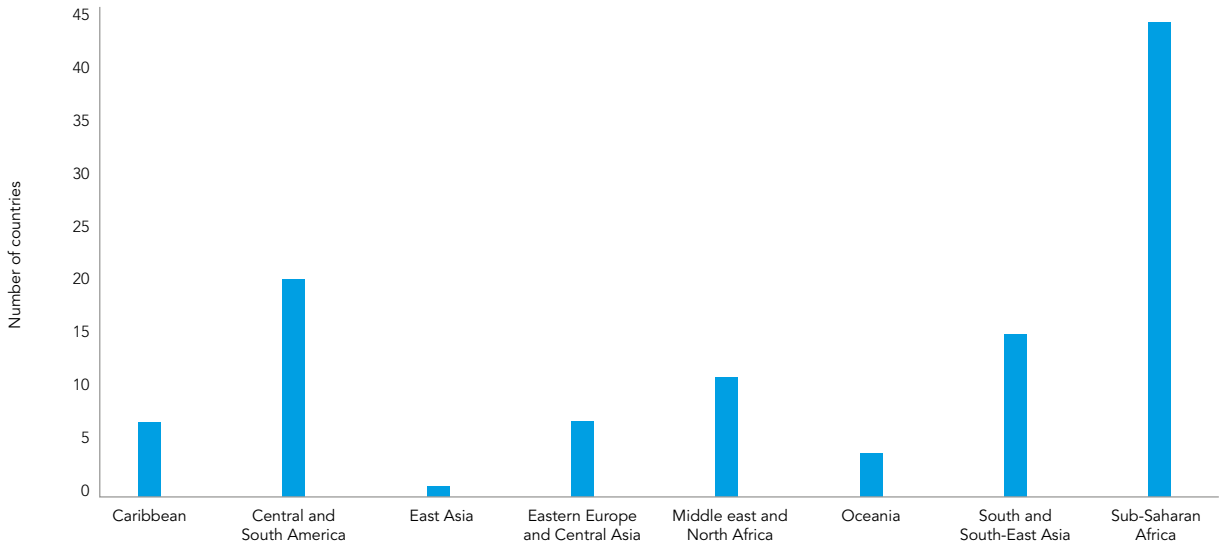
stocktaking exercise, as well as a national consultation of stakeholders including people living with HIV, to review progress and chart future directions. UNAIDS asked that countries submit a report summarizing key findings from the mid-term review, as well as a matrix of responses to specific questions posed for each target.

Mid-term reviews aimed to serve four key purposes:

- Reaffirming and strengthening leadership and commitment to achieve the targets and commitments in the 2011 UN Political Declaration on HIV and AIDS.
- Strengthening accountability, ownership and transparency regarding strategic data on progress towards targets and commitments.
- Improving the effectiveness and efficiency of national programmes by using the mid-term review as a springboard for development of national HIV investment cases.
- Promoting and applying principles of shared responsibility and global solidarity regarding HIV responses and identifying strategies to ensure long-term sustainability.

One hundred and twenty low- and middle-income countries committed to conduct mid-term reviews of progress in relation to the 10 targets and commitments. As of 5 August 2013, 109 countries had conducted mid-term reviews of national progress, representing 91% of those that had made the commitment (see Figure C). Of these 109 countries, 100 had conducted a formal stocktaking exercise and 101 had also held a national stakeholders' consultation.

FIGURE C
Number of countries that conducted mid-term reviews in 2013



Source: Mid-Term Reviews 2013.

In four regions – sub-Saharan Africa, Central and South America, Middle East and North Africa, and Oceania – 100% of countries[1] that committed to hold a mid-term review had completed the process as of August 2013. Mid-term reviews were also conducted by 94% of countries in South and South East Asia, and 70% in Eastern Europe and Central Asia. The lowest rate was reported in the Caribbean, where 54% of countries that had committed to hold a mid-term review had done so as of August 2013.

MOVING FORWARD: 2015 AND BEYOND

This report summarizes findings for each of the 10 targets and commitments. Each section takes account of GARPR results, findings from the mid-term reviews and other important developments that have occurred over the past year.

Each section looks both to the past and to the future. While progress as of December 2012 is noted, with findings derived primarily from GARPR reporting and the HIV estimates, each section also examines what needs to happen to accelerate progress in each area. The forward-looking component of each section draws primarily from mid-term reviews, highlighting commitments that countries have made to expand the reach of key services, improve service efficiency and enhance domestic investment.

The following analysis demonstrates that HIV continues to be a pathfinder in the provision of people-centred and rights-based services. As section 10 discusses, elements of the HIV response are being integrated with other health and development programmes in an effort to eliminate parallel systems and achieve greater effectiveness and efficiencies. Yet, for the sake of continued progress against the AIDS epidemic, the high priority accorded to HIV needs to be maintained and the effective aspects developed further and embedded into future health and development goals.

[1] One country was not able to hold a mid-term review as a result of the security situation.

1. REDUCE SEXUAL TRANSMISSION OF HIV BY 50% BY 2015

Prevention efforts continue to bear fruit, with the number of new HIV infections among adults in low- and middle-income countries in 2012 being 1.9 million (1.6–2.3), which was 30% lower than in 2001 (see Figure 1.1). Declining rates of new HIV infections in 26 low- and middle-income countries are a testament to these efforts. Reductions in new infections among adults since 2001 primarily represent a reduction in sexual transmission, although the declining trend in the global number of new HIV infections among adults needs to be accelerated if the 2015 target is to be reached.

While challenges persist in preventing new infections, opportunities to dramatically lower HIV incidence have never been more promising. In recent years, evidence has emerged that antiretroviral therapies can reduce the risk of HIV transmission by as much as 96%,[1] voluntary medical male circumcision by approximately 60%,[2,3,4] pre-exposure antiretroviral prophylaxis by more than 40% among men who have sex with men[5] and 49% among people who inject drugs.[6]

Structural approaches, including cash transfers, vouchers and food and nutrition support, show potentially promising results as a possible strategy to reduce vulnerability to HIV infection faced by girls and young women. While these new approaches have proven effective in trials, they have not yet led to a measurable and sustained decline in new infections at the population level, in large measure due to the failure to bring these strategies to scale.

As the 2011 UN Political Declaration on HIV and AIDS confirms, HIV prevention must remain the cornerstone of the HIV response. To be optimally effective, prevention efforts should include strategic combinations of behavioural, bio-medical and structural programming and approaches that focus on rapid scale-up in geographic settings and populations at greatest risk of acquiring and transmitting HIV.

Countries where adult HIV incidence declined more than 50% between 2001 and 2012:

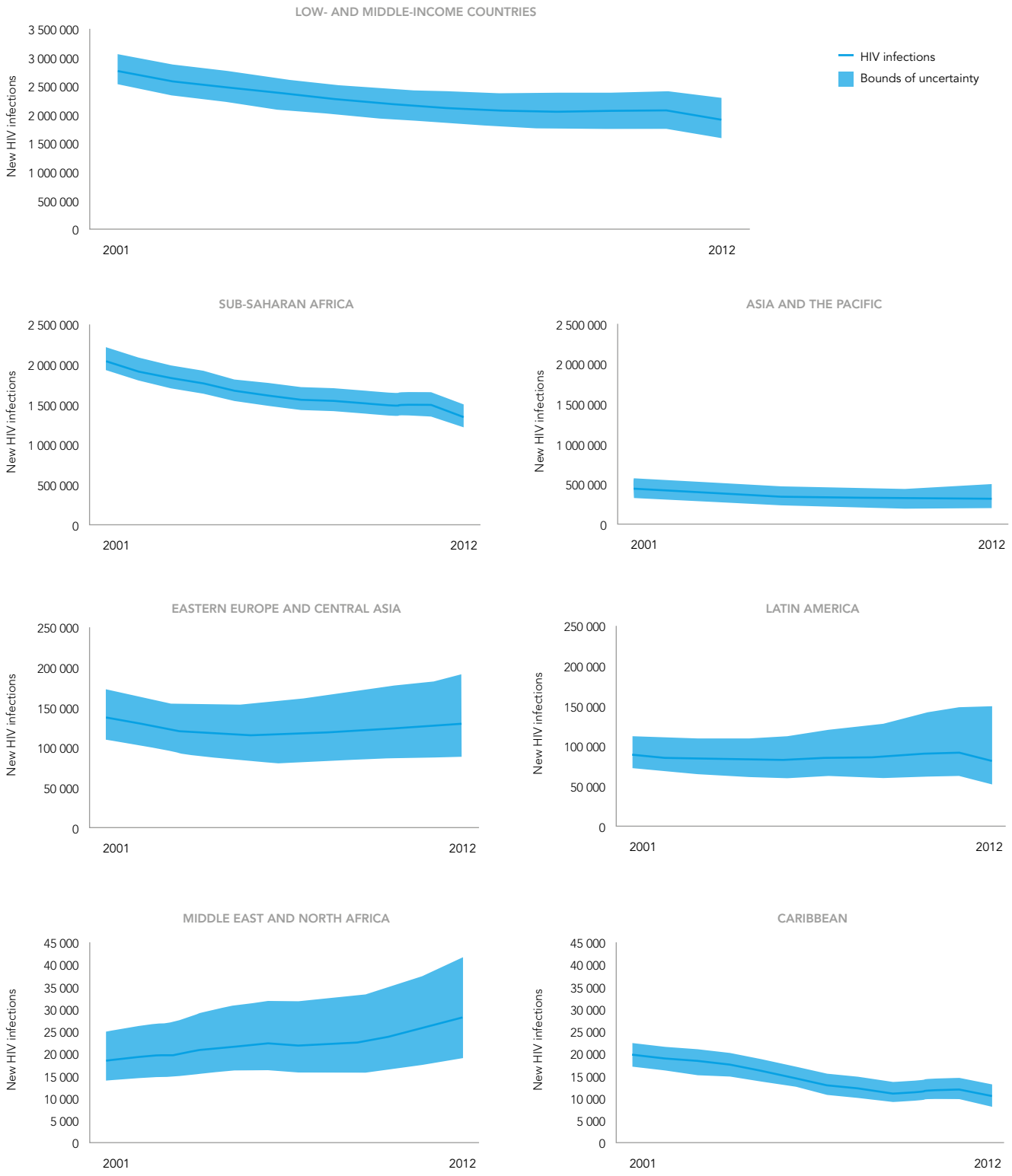
1. Belize
2. Botswana
3. Cambodia
4. Côte d'Ivoire
5. Djibouti
6. Dominican Republic
7. Eritrea
8. Ethiopia
9. Gabon
10. Ghana
11. India
12. Jamaica
13. Liberia
14. Malawi
15. Myanmar
16. Namibia
17. Nepal
18. Niger
19. Nigeria
20. Papua New Guinea
21. São Tomé and Príncipe
22. Senegal
23. Thailand
24. Togo
25. Ukraine
26. Zambia

TRENDS IN SEXUAL HIV TRANSMISSION

Trends in new adult infections differ among regions. The epidemic continues to disproportionately affect sub-Saharan Africa, home to 70% of all new HIV infections in 2012.

However, since 2001, the annual number of new HIV infections among adults in sub-Saharan Africa has declined by 34%. The most pronounced decline in new infections since 2001 (49%) has occurred in the Caribbean. New HIV infections have been on the rise in Eastern Europe and Central Asia in recent years despite declines in Ukraine. By contrast, new HIV infections continue to rise in the Middle East and North Africa.

FIGURE 1.1
New HIV infections among adults in low- and middle-income countries, by region, 2001–2012



Source: UNAIDS, 2012 estimates.

Although the natural dynamics of the epidemic have undoubtedly also played an important role, changes in sexual behaviour, such as delayed sexual debut, high levels of condom use and reductions in multiple partners, are also responsible for significant declines in high-prevalence countries. For example, in Zimbabwe, declines in HIV incidence (new infections) were driven by behavioural shifts, notably a reduction in multiple sexual partners.[7,8]

Recent trends (since 2000) in sexual behaviour, demonstrated in most countries, continue to indicate that more people are adopting safer sexual behaviours. Knowledge regarding the prevention of HIV transmission has increased amongst young people; the proportion of 15–24 year olds who have had sex before 15 years is decreasing; condom use has risen amongst people with multiple sexual partners; and the proportion of young people who have received an HIV test and learned their results has also increased.

However, there are signs of an increase in risky sexual behaviours in several countries. Recent evidence indicates a significant increase in the number of sexual partners in some countries (Burkina Faso, Congo, Côte d'Ivoire, Ethiopia, Gabon, Guyana, Rwanda, South Africa, Uganda, the United Republic of Tanzania and Zimbabwe), as well as a decline in condom use (in Côte d'Ivoire, Niger, Senegal and Uganda); see Table 1.1.

REINVIGORATING SOCIAL AND BEHAVIOUR CHANGE

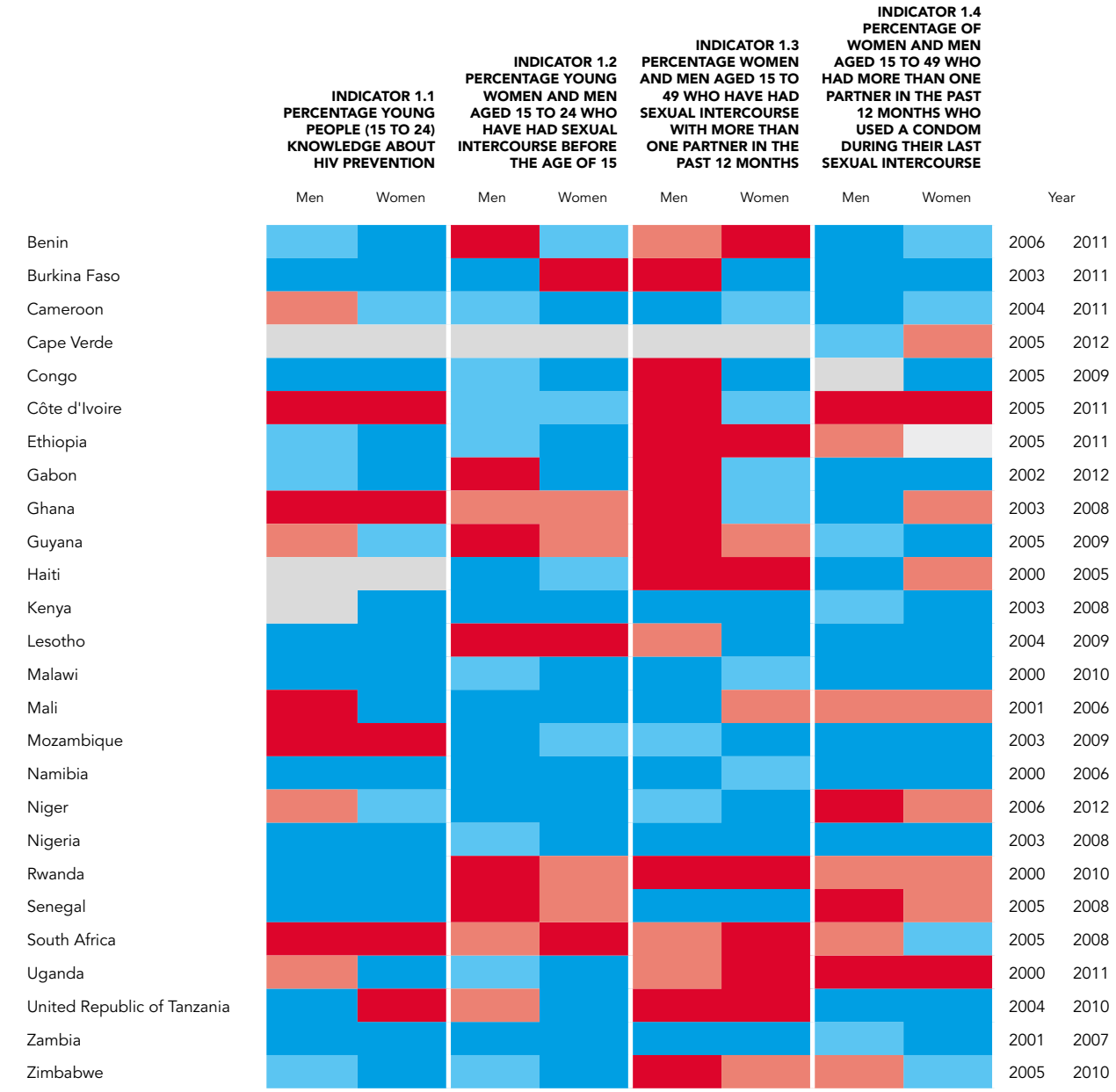
Although a global meta-analysis of studies determined that 'behavioural interventions reduce sexual risk behaviour and avert sexually transmitted infections and HIV',[9] many countries lack a comprehensive strategy for rolling out these programmatic approaches. Social-behavioural programmes are often implemented in isolation, uncoordinated, insufficiently tailored to address the needs of the intended population and lacking in rigorous evaluation at a scale necessary for widespread roll-out. It is clear that only when a comprehensive set of HIV prevention initiatives is rolled out at a national scale, with sufficient access to, and frequent use of, quality services, will countries realize the optimal prevention returns.

There are worrisome signs that social and behavioural programming might now have a lower priority. Mid-term reviews identified declining support for social-behavioural HIV prevention programmes in several countries, including in Namibia, where the highly successful 'Take control' campaign was discontinued in 2011. However, as new biomedical tools are rolled out, effective social-behavioural and structural programmes will not only remain essential in their own right but will also be needed to maximize the efficacy of biomedical approaches, including averting the possible emergence of risk compensation. Prevention programmes must be able to address the biomedical aspects of HIV prevention without focusing solely on the medical aspects of sexual relations. It is necessary to harmonize messages and the dissemination of information about HIV transmission and various prevention approaches. Behavioural and structural programmes also help to overcome barriers to service uptake, such as social exclusion, criminalization, stigma and inequity. These activities amplify the impact of antiretroviral therapy, other antiretroviral-based HIV prevention strategies (such as pre-exposure prophylaxis) and voluntary medical male circumcision.

The global revolution in information and communications technology – which has dramatically altered the ways in which people network, interact, communicate and share information – offers new opportunities to expand and reinvigorate social-behavioural and structural programming. These include strategic use of 'old' media opportunities

TABLE 1.1

Knowledge, sexual behaviour and testing in countries with HIV prevalence among adults greater than 1%, 2000–2012*



Sources: GARPR 2013; nationally representative household surveys.

*Comparison of indicators is carried out between the two most recent surveys and test of significance at 0.05.

(such as fictional television series that promote HIV prevention in Zambia),[10] as well as increased leveraging of new information tools, such as strategies that integrate mobile telecommunications within health programmes for improved delivery of services.

INVESTING IN CONDOM PROGRAMMING

Condom programming is an integral component of effective HIV prevention. When used correctly and consistently, condoms remain one of the most efficient technologies available to prevent sexual transmission of HIV. In South Africa, modelling indicates that increases in condom use, which occurred at the same time that distribution of male condoms significantly increased, played a primary role in the declines in national HIV incidence that occurred during 2000–2008.[11] Condom and lubricant programming is an especially critical element of an evidence-based package to prevent HIV transmission especially for people involved in short-term sexual partnerships, serodiscordant couples, sex workers, men who have sex with men and other key populations including people who inject drugs and their sexual partners. Programmes that combine couples' counselling with condom distribution have proven effective in many countries, such as Kenya[12] and Zambia.[13] Condom programming should be an integral component of behavioural approaches, especially those that empower women and young people to negotiate condom use.

In light of their especially high risk of acquiring HIV, uninfected partners in serodiscordant couples (where one of the partners is HIV-negative) have an urgent need for effective HIV prevention programming. Key prevention strategies include testing (to enable individuals to be aware of their own and their partner's status), condom use and provision of antiretroviral therapy to the partner living with HIV, regardless of their CD4 count. Antiretroviral therapy for the HIV-negative partner is also an efficacious strategy.

Funding challenges undermine efforts to ensure ready access to both male and female condoms. With condom programming largely funded by international donors in many countries, funding uncertainties have complicated national forecasting, procurement, supply and distribution. In 2012, the donor community decreased their supplies of both male and female condoms compared to 2011. Approximately 2.4 billion male condoms and 31.8 million female condoms were donated in 2012 as compared to 3.4 billion male condoms and 43.4 million female condoms in 2011.[14] Country reports confirm that condom access dropped in 2012; Namibia reports that funding challenges contributed to a decline in the number of condoms distributed in 2011–2012, while Uganda reports frequent periodic shortages and stock-outs of free condoms.

A review of sex workers' experiences of public health facilities in four countries in Eastern and Southern Africa identified insufficient access to condoms and lubricants among their unmet health needs.[15] A 2012 survey in 165 countries among 5 000 men who have sex with men also found that they had difficulties in accessing lubricants.[16]

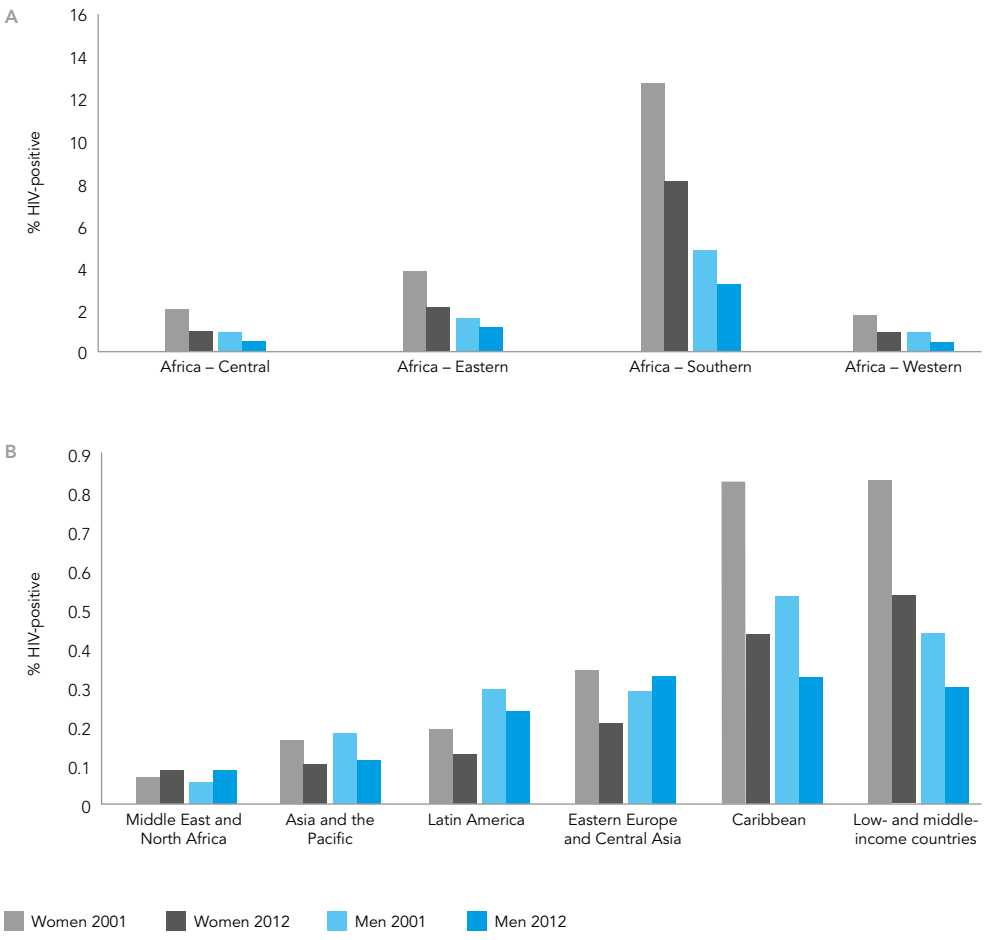
New technological advances in condom design aim to generate products that meet the needs and desires of the people who are most likely to use them. PATH, an international health organization, is testing a new female condom in an effort to generate a more user-friendly product, while the Origami condom is a collapsible, accordion-shaped product designed for use by both men and women during both vaginal and anal intercourse.[17] In 2012, the World Health Organization (WHO) prequalified a female condom produced by Cupid Ltd., and this product has been added to the procurement list of the United Nations Population Fund (UNFPA).

PREVENTING NEW HIV INFECTIONS AMONG ADOLESCENTS AND YOUNG PEOPLE

Across sub-Saharan Africa, diverse countries have achieved notable reductions in HIV prevalence among young people (15–24 years). In sub-Saharan Africa, HIV prevalence among young women and men fell by 42% from 2001 to 2012. Even with these favourable trends, HIV prevalence among young women remains more than twice as high as among young men throughout sub-Saharan Africa.

Trends are mixed among other regions, with the Caribbean experiencing substantial declines but with no clear downward trend apparent in the Middle East or North Africa (see Figure 1.2). Evidence is limited regarding HIV prevalence among young people who are members of key populations at higher risk (or members' partners), although limited surveys and anecdotal reports suggest that their HIV risk is extremely high.

FIGURE 1.2
Prevalence of HIV among young women and men (15–24 years), by region, 2001 and 2012



Source: UNAIDS 2012 estimates.

An estimated 2.1 million adolescents (10–19 years) were living with HIV in 2012 in low- and middle-income countries. Data on young adolescents (10–14 years) are limited, resulting in little information on progress toward preventing new infections or averting deaths for the adolescent age group.

In sub-Saharan Africa, the percentage of young people (15–24 years) demonstrating comprehensive and accurate understanding of HIV rose by five percentage points for men and by three for women from 2002 to 2011, although knowledge levels remain low (36% for young men and 28% for young women). The percentage of young people reporting condom-use the last time they had sex also rose during this period for both women and men.

Persistent challenges to effective HIV prevention for adolescents and young people include inadequate access to high-quality, youth-friendly HIV and sexual and reproductive health services, and sexual violence against young women and girls.[18] In addition, some young people are hindered in their ability to obtain essential services by limited protection for young people's confidentiality and right to medical privacy.[19] Inadequate access to comprehensive sex education, shown to be effective in delaying sexual debut and increasing condom use among young people who are sexually active,[20] also undermines efforts to protect young people from acquiring HIV.

New strategies have emerged to reduce young people's vulnerability to HIV, including social cash transfers that create incentives for safer behaviours. Recently, a randomized controlled study in Lesotho found that a programme of financial incentives reduced the probability of acquiring HIV by 25% over two years.[21] In a separate randomized controlled study in Malawi, cash transfers for schoolgirls were found to reduce new HIV infections by 60%.[22] There is clear potential for cash transfers to support HIV prevention for young people, and continued research on the HIV prevention role of such programmes is recommended.[23]

SCALING UP VOLUNTARY MEDICAL MALE CIRCUMCISION

It is projected that circumcising 80% of all uncircumcised adult men in the countries with high HIV prevalence and low prevalence of male circumcision by 2015 would avert one in five new HIV infections by 2025, with long-term prevention benefits for women as well as men.[24] At the same time that priority countries scale-up voluntary medical male circumcision for adults, they are advised to roll out the routine offer of medical circumcision for newborn males.

UNAIDS priority countries for voluntary medical male circumcision:

1. Botswana
2. Ethiopia
3. Central African Republic
4. Kenya
5. Lesotho
6. Malawi
7. Mozambique
8. Namibia
9. Rwanda
10. South Africa
11. South Sudan
12. Swaziland
13. Uganda
14. United Republic of Tanzania
15. Zambia
16. Zimbabwe

Immediately following issuance of the recommendation for scale-up in 2007, progress in implementing voluntary medical adult male circumcision was initially slow, although there are encouraging signs that the pace of uptake may be increasing. However, scale-up of voluntary medical adult male circumcision varies considerably among priority countries (see Figures 1.3, 1.4).

As of December 2012, 3.2 million African men had been circumcised through specific services for voluntary medical male circumcision. The cumulative number of men circumcised almost doubled in 2012, rising from 1.5 million as of December 2011. Still, it is clear that reaching the estimated target number of 20 million in 2015[25] will require a dramatic acceleration.

FIGURE 1.3
Annual number of voluntary medical male circumcisions, selected countries, 2009–2012

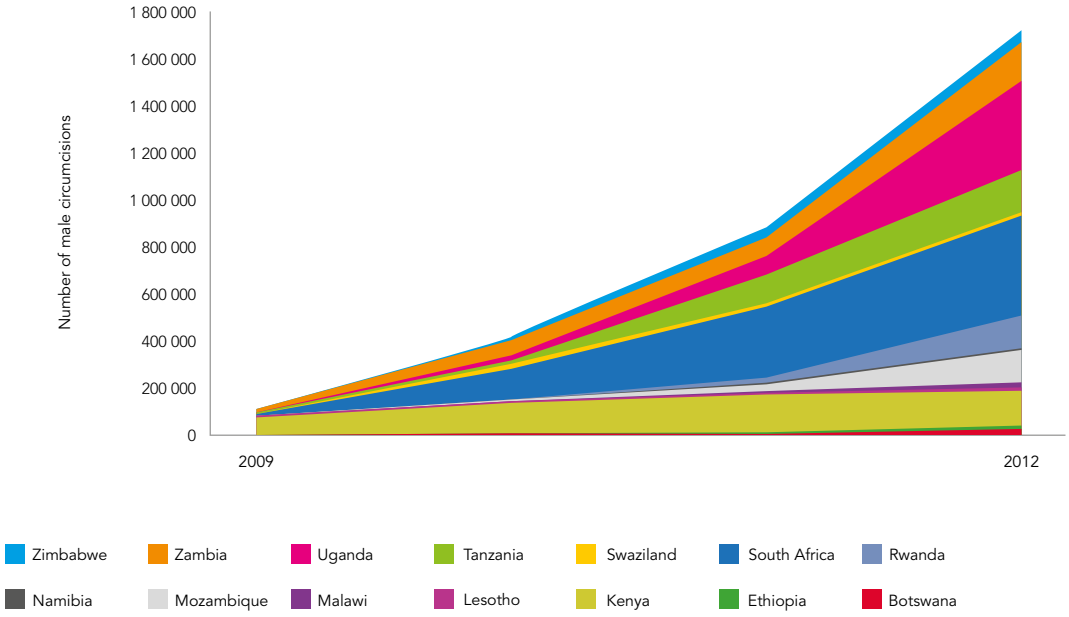
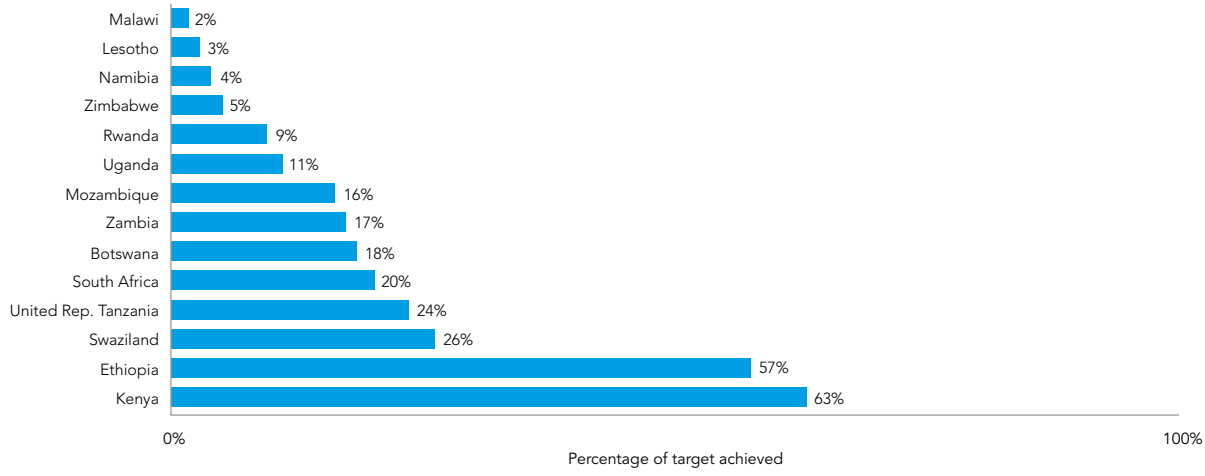


FIGURE 1.4
Voluntary medical male circumcision: countries' progress towards 2015 targets, by December 2012



Sources: GARPR 2013; WHO (2012). Progress in Scaling up Voluntary Medical Male Circumcision for HIV Prevention in East and Southern Africa, January–December 2012.

Notes:
1. Implementation of voluntary male medical circumcisions (VMMCs) is done at different rates in the priority countries.
2. At the end of December 2012 just over 3 million VMMCs were reported in these countries, which amounts to the achievement of 15% of the estimated number needed to reach the 80% prevalence rate overall.

Progress has been most pronounced in the provinces prioritized for scale-up in Ethiopia (reaching 57% of the coverage target) and Kenya (63%). In five countries where voluntary medical male circumcision is stated to be a priority (Lesotho, Malawi, Namibia, Rwanda and Zimbabwe), coverage of voluntary medical male circumcision for adults is less than 10%.

Twelve countries submitted national mid-term reports that identified voluntary medical male circumcision as a priority. Five countries (Botswana, Malawi, Namibia, the United Republic of Tanzania and Zimbabwe) cited low male circumcision uptake as a challenge in their national response. Mid-term reports identified a variety of impediments to expedited scale-up, including financial constraints (Namibia), stock-outs of essential circumcision commodities (Uganda) and human resource limitations (Zimbabwe). Swaziland's mid-term report makes no mention of voluntary medical male circumcision, even though the country has been identified as a key priority for scale-up. Moving forward, Lesotho has committed to increase resources for adult and neonatal medical male circumcision; Zimbabwe aims to provide improved circumcision training for nurses; and Uganda has pledged to intensify circumcision scale-up in the formal health sector and among district health systems.

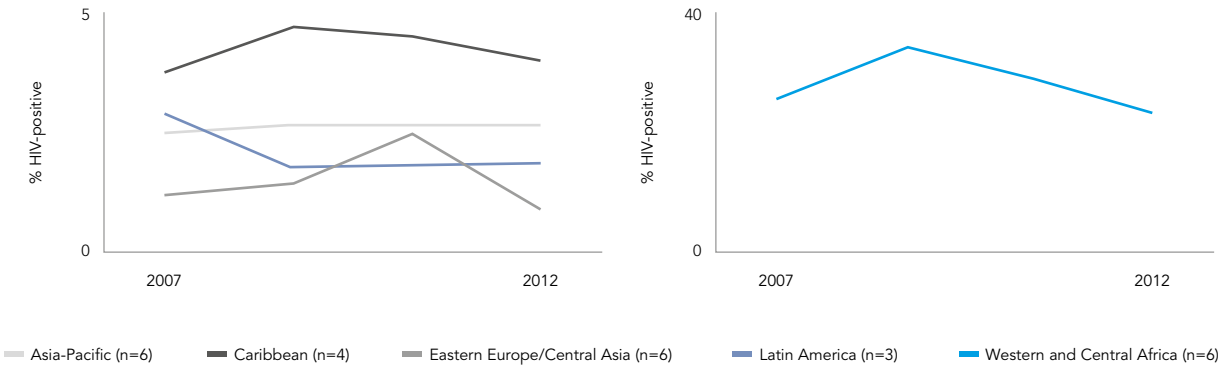
There is evidence that programmes have had much greater success in reaching males younger than 25 years.[26] As men in sub-Saharan Africa are at highest risk for acquiring HIV when they are in their twenties and thirties, men in these age groups are the top priority for scale-up. While voluntary medical circumcision confers a clear HIV prevention benefit on young men and should be continued, it has less immediate impact on new HIV infections than circumcision for men at greater risk. In an effort to reach men aged 25–29 years whose circumcisions would be more likely to result in immediate HIV prevention benefits, studies are currently underway to evaluate various innovative strategies to build demand for circumcision.

In 2013, WHO prequalified the first adult circumcision device for use in low-resource settings. The device, PrePex, requires no sutures or injected local anaesthetic and may be placed and removed by trained mid-level health providers including nurses. It is hoped that the device will accelerate scale-up by providing men with an alternative and by relieving demands on the limited number of surgeons available in priority countries.

HIV PREVENTION FOR SEX WORKERS

The epidemic continues to have a profound effect on female, male and transgender sex workers. Globally, female sex workers are 13.5 times more likely to be living with HIV than other women.[27] In countries in West Africa, substantial proportions of new infections (10–32%) were estimated to occur as a result of sex work; in Uganda, Swaziland and Zambia, 7–11% of new infections are thought to be attributable to sex workers, their clients and clients' regular partners.[28] Median HIV prevalence among sex workers varies across the world, from 22% in Eastern and Southern Africa (eight countries) and 17% in Western and Central Africa (17 countries) to less than 5% in all other regions (see Figure 1.5). These surveys are typically conducted in capital cities and are not nationally representative, so the findings may not be applicable to the entire population. A separate analysis of available data found a pooled HIV prevalence among female sex workers of 36.9% in sub-Saharan Africa, 10.9% in Eastern Europe and 6.1% in Latin America.[29] Median prevalence among male sex workers gleaned from published literature from 24 countries since 2006 is 14%.

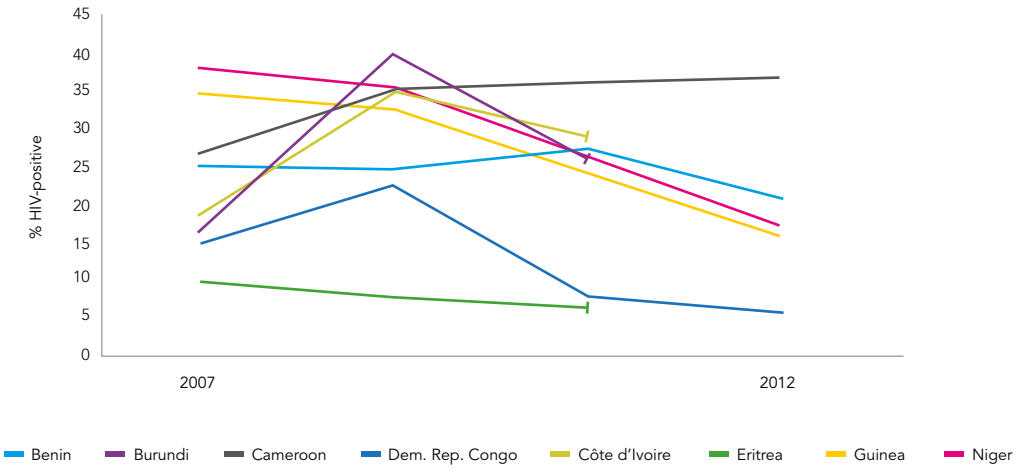
FIGURE 1.5
HIV median prevalence among sex workers, by region, 2007–2012*



Source: GARPR 2013.

*Data on HIV prevention, care and treatment services for key populations can be difficult to obtain. Most countries rely on community or facility-based surveys to estimate programme coverage for these populations. Frequency of these surveys varies from semi-annual to every three to four years. This approach yields valuable data for local programmes but cannot be readily extrapolated to provide a fully accurate picture of a national situation. UNAIDS excludes data that derive from small (< 100) samples (unless the country is very small), other clearly biased samples (e.g. HIV testing uptake from a VCT site) or and data collected more than three years ago. Data where background information is not submitted is included. Further key populations are unevenly distributed throughout most countries and may be reluctant to participate in government-led activities depending on the local legal environment. This makes surveys of key populations challenging.

FIGURE 1.6
HIV prevalence among sex workers in Africa, selected countries, 2007–2012*



Source: GARPR 2013.

*See footnote to Figure 1.5.

Among countries reporting data in 2013, median HIV prevalence among sex workers appears to have declined in recent years in parts of West and Central Africa. However, it is difficult to draw firm conclusions based on the limited survey data available, and HIV prevalence among sex workers remains extremely high in many countries. Among 62 countries reporting data, prevalence ranged from < 1% in 14 countries to 70% (from a survey of 323 female sex workers) in Swaziland. In other regions, where HIV prevalence among sex workers is considerably lower, prevalence trends appear to be stable, although there are indications of a reduction in HIV prevalence since 2007 among sex workers in the Caribbean. Among eight countries in Eastern and Southern Africa, median HIV prevalence among sex workers under 25 years is 11% (range: < 1%, 64%), and 29% (range: < 1%, 74%) among sex workers older than 25.

Countries report that condom use at last commercial sex is high and improving; 44 countries reported higher median condom use in 2012 than in 2009: 85% compared to 78% (see Figure 1.7).

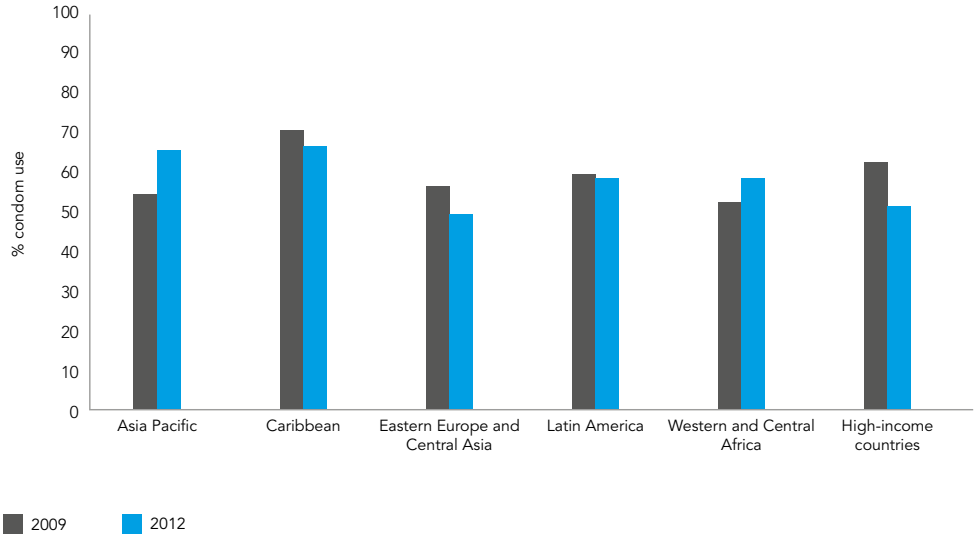
Inadequate financing for HIV prevention programming focused on sex workers is a critical reason why HIV prevention coverage remains so low. Notwithstanding sex workers' disproportionate risk of acquiring HIV, prevention programmes for sex workers account for a meagre share of HIV prevention funding globally.[30] In most regions, national governments have allocated relatively few national resources to preventing HIV among sex workers, with international donors funding the overwhelming majority of HIV prevention efforts for this group (see Figure 1.8). Notable exceptions to these global patterns are Latin America and Southern Africa, where domestic spending on HIV prevention services for sex workers outweighs international contributions.

For sex workers, as for men who have sex with men and other marginalized populations who have elevated risk of acquiring HIV, programmatic deficits are compounded by social and legal disadvantages that increase vulnerability and deter individuals from obtaining the services they need. These factors are addressed in greater detail in Section 8.

PREVENTING NEW HIV INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN

Recent modes of transmission analyses found new infections among men who have sex with men, along with other key populations, to be important components of national epidemics in Kenya and South Africa. According to modes of transmission analyses in Latin America, men who have sex with men represent the largest source of new infections in the region, ranging from 33% in Dominican Republic to 56% in Peru. Median HIV prevalence among men who have sex with men exceeds 1% in all regions of the world and is consistently higher than prevalence among men overall. In 2012, according to national GARPR reports, the highest median HIV prevalence among men who have sex with men was reported in Western and Central Africa (19%) and Eastern and Southern Africa (15%), with somewhat lower but still high levels of HIV infection reported among men who have sex with men in Latin America (12%), Asia and the Pacific (11%), Western and Central Europe and North America (8%) and the Caribbean (7%). This information is roughly consistent with a 2012 global analysis of available epidemiologic studies, which found that HIV prevalence among men who have sex with men in the Americas, South and South-East Asia and sub-Saharan Africa ranging from 14–18%.[31] As in the case of sex workers, epidemiological surveys of men who have sex with men are limited and may not be nationally representative. Epidemiological trends among men who have sex with men vary by region.

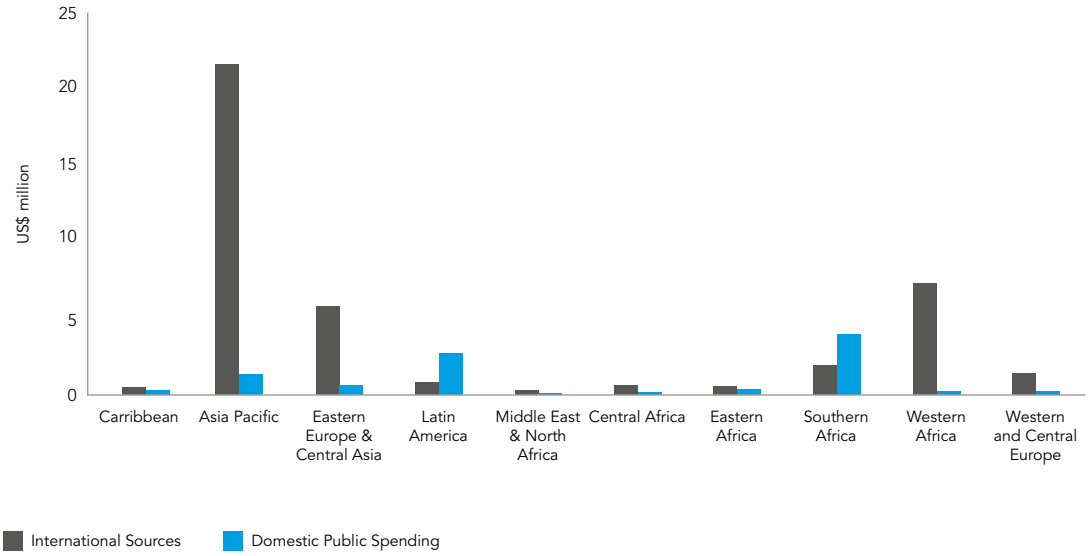
FIGURE 1.7
Reported condom use at last commercial sex, by region, 2009–2012*



Source: GARPR 2013.

*See footnote to Figure 1.5.

FIGURE 1.8
International and domestic public spending on programmes for sex workers in low- and middle-income countries, by region, latest available data as of 2013



Source: GARPR 2013.

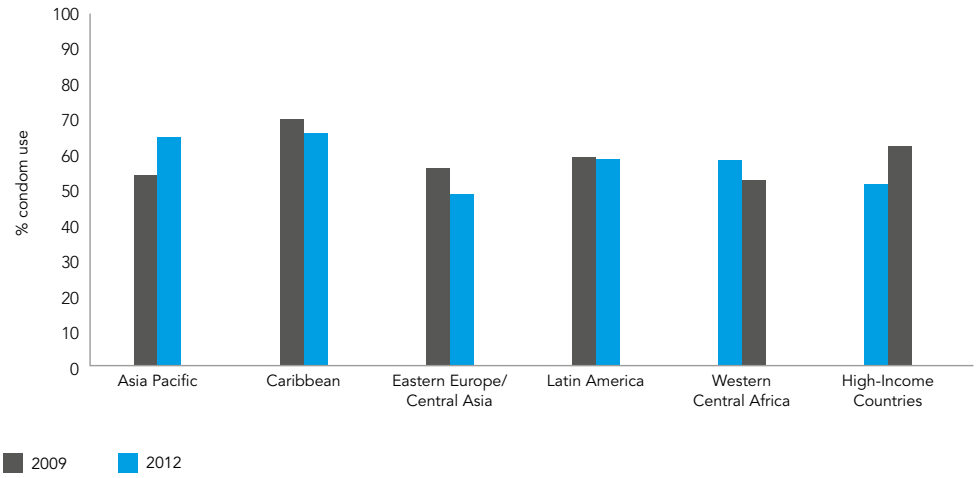
Globally, prevalence among men who have sex with men appears to have increased slightly, and has been at very high levels in recent years. Reported HIV prevalence among men who have sex with men in 2012 ranged from < 1% in seven countries to 57% in Guinea (survey of 242 men) (see Figure 1.9). Men who have sex with men are often infected while quite young, with median HIV prevalence of 5.4% for men who have sex with men under 25 years old, according to studies primarily in countries with concentrated epidemics. Median prevalence rises to over 15% among men who have sex with men 25 years and older in the 20 countries reporting age-disaggregated data for this key population.

According to surveys, men who have sex with men often have extremely limited access to condoms, water-based lubricants, HIV education and support for sexual risk reduction.[32] Antiretroviral-based HIV prevention methods, including HIV treatment as prevention and pre-exposure antiretroviral prophylaxis, offer promise in terms of improving HIV prevention efforts for men who have sex with men,[33] although minor side-effects and possible long-term effects still need to be assessed. The fear of disapproval and discrimination by health care providers might also deter many men who have sex with men from accessing mainstream health services.[34] Increasing the access of men who have sex with men to culturally sensitive HIV counselling and testing and antiretroviral therapy is an urgent global health priority.

The percentage of men who have sex with men reached by HIV prevention programmes, reported by 20 countries in both 2009 and 2012, was relatively stable at a mean of 52% and 54%, respectively. Median coverage rose appreciably in Asia and the Pacific and in Eastern Europe and Central Asia (34% vs 56% and 43% vs 64%, respectively). In Latin America, the median was unchanged, at 51%. Median condom use at last anal sex reported from

FIGURE 1.9

Median prevalence of reported condom use at last anal intercourse among men who have sex with men, by region, 2009–2012*



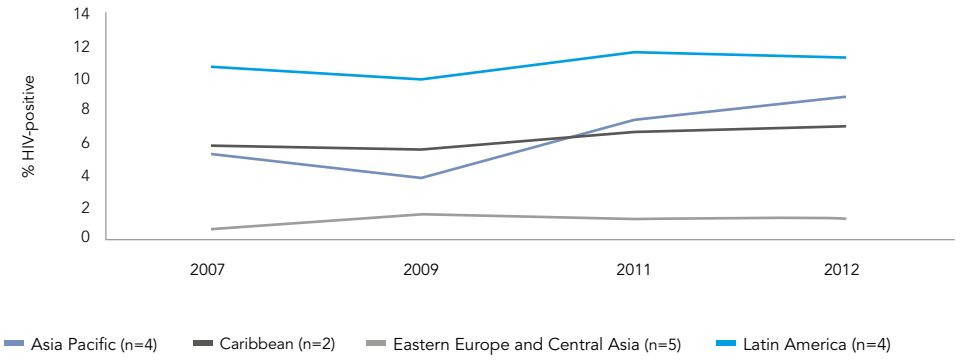
Source: GARPR 2013.

*See footnote to Figure 1.5. 43 countries reporting.

43 countries, at 57%, did not change over the same time period (see Figure 1.10). With only 20 countries reporting HIV prevention coverage data for men who have sex with men, reported figures may not be indicative of global coverage. The limited information provided by countries through GARPR generates estimates of HIV prevention coverage for men who have sex with men that are considerably higher than other estimates, with one international review concluding that fewer than one in ten men who have sex with men receive a basic package of HIV prevention interventions.[35] GARPR reporting may overestimate programmatic reach, as countries that have made no commitments on HIV prevention among men who have sex with men do not provide reports.

FIGURE 1.10

HIV median prevalence among men who have sex with men, by region, 2007–2012*

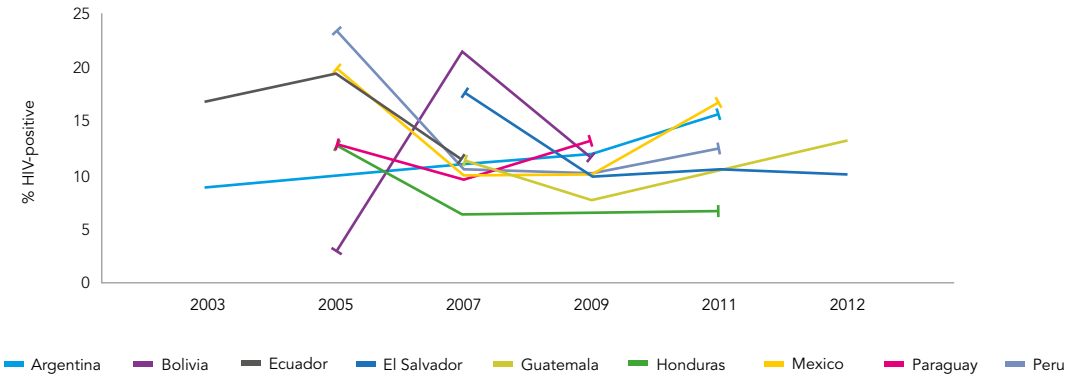


Source: GARPR 2013

*See footnote to Figure 1.5.

FIGURE 1.11

Percentage of men who have sex with men living with HIV in selected countries of Latin America, 2003–2012*

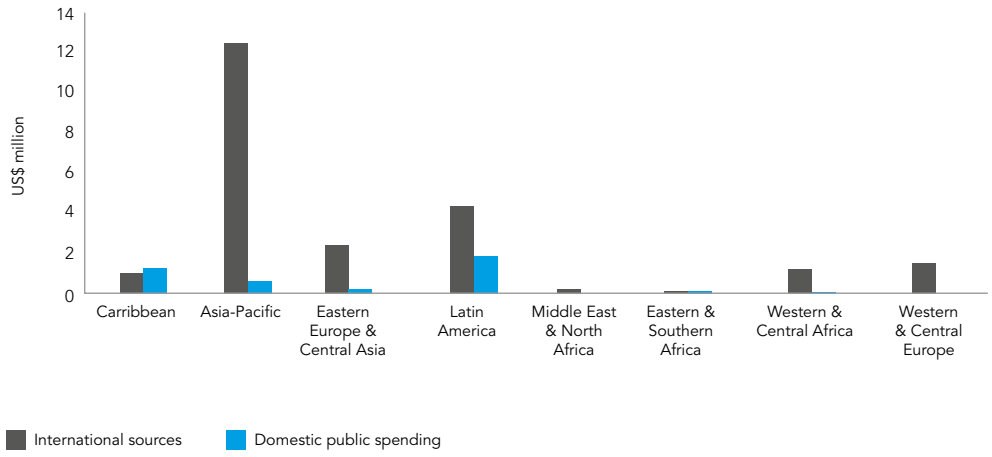


Source: GARPR 2013

*See footnote to Figure 1.5.

FIGURE 1.12

International and domestic public spending for programmes for men who have sex with men in low- and middle-income countries, by region, latest data available (2007–2012)



Source: GARPR 2013

Inadequate resources impede efforts to reach men who have sex with men with essential HIV prevention services. International funding vastly outweighs domestic spending on focused prevention services for men who have sex with men globally, including in all regions except the Caribbean. Funding for HIV prevention services for men who have sex with men is especially limited in East Asia, the Middle East and North Africa, and across sub-Saharan Africa (see Figure 1.12).

The effects of limited funding are compounded by a host of additional challenges, including the deterrent effects of homophobia on the ability or willingness of men who have sex with men to seek essential HIV services. Punitive laws regarding same-sex sexual relations, an issue addressed at greater length in Section 8, also create a climate of fear and intolerance that is inconsistent with a rights- and evidence-based response.

TOWARDS 2015

Political commitment and strategic action are needed to reduce the number of adults who acquire HIV sexually. The world is not on track to halve sexual transmission by 2015 and that is particularly true of several high-prevalence countries. Momentum needs to be revived. In particular, key HIV prevention programme elements – including social-behavioural approaches (with financial incentives, where appropriate), condom and lubricant promotion, male circumcision and HIV prevention programmes focused on key populations, such as men who have sex with men and sex workers – need to be scaled up and strategically combined to maximize the impact of finite funding. To maximize the number of new infections averted, scale-up of these key elements of HIV prevention programmes need to be coupled with continued roll-out of HIV treatment.

There appears to be strong commitment on which to build. Among the 109 countries reporting results from mid-term reviews, all identified reducing sexual transmission as a national priority, with the target integrated into all national HIV strategic plans.

Social-behavioural programmes need to be better coordinated and more strategically focused. Intensified efforts are needed to ensure that social-behavioural programmes are evidence-informed, rigorously evaluated, gender- and youth-sensitive and address key drivers of the epidemic, including concurrency among sexual partners. High transmission zones are heterogeneously distributed across countries, whether sexual transmission is primarily among heterosexual, non-commercial partners, sex workers and their clients or men who have sex with men. National responses should consider the distribution of HIV infection to focus resources on geographic and population zones where transmission risks are greatest. In concentrated epidemics, it is also important to recognize data gaps and to structure the national response to allow for uncovering other, as yet unrecognized, high transmission zones. Structural and financial empowerment approaches urgently need to be scaled up and linked synergistically with other HIV prevention efforts.

All key stakeholders, including international donors and health ministries, should work to expand access to male and female condoms, as well as lubricants, and to increase their use. Steps to ensure the consistency and reliability of condom and lubricant supplies are critical. Specific efforts should focus on ensuring condom security for young people and key populations, and learning from marketing in other fields should be leveraged to increase the reach and effectiveness of condom programming.

Priority countries where scale-up of voluntary medical male circumcision has been slow should take immediate action to promote and deliver this essential HIV prevention method, using lessons learnt from settings where rapid scale-up has occurred. Among priority countries generally, enhanced efforts are needed to reach men in their twenties and thirties, who are currently less likely to seek circumcision services than younger men.

Countries need to translate recognition of HIV prevention needs among sex workers and their clients and partners into scaled-up evidence- and rights-based programmes. According to Malawi's mid-term review, sex workers have high HIV prevalence, but the national prevention approach lists eight categories of key populations for HIV prevention including truck drivers, teachers and male vendors, though not people who inject drugs. Prevention programmes for people who inject drugs should take into account the fact that, in some countries, many people who inject drugs are also engaged in sex work.

National commitments to respond to the HIV epidemic among men who have sex with men lag behind those for other key populations. Where data are collected, men who have sex with men typically share a disproportionate burden of HIV infection. In many countries, data on HIV prevalence among men who have sex with men do not exist. Countries need to undertake more concerted efforts to measure the extent of the epidemic among men who have sex with men while building comprehensive services that remove barriers to access. Stigma, discrimination and oppressive legal environments in many settings discourage men who have sex with men from seeking HIV testing and appropriate, high-quality prevention, care and treatment

services. National programmes should endeavour to remove legal obstacles to practising homosexuality, increase sensitivity to the health needs of men who have sex with men, improve access to health services and build programmes to intensify HIV preventive behaviours in this population through improved access to condoms and lubricants and by creating a cultural norm of safer sex. Programmes should also consider using STI services targeted to men as a gateway to improve HIV prevention, treatment and care for men who have sex with men.

At the same time, countries should seize the HIV prevention potential of antiretroviral therapy by accelerating scale-up of HIV treatment and taking steps to implement the 2013 WHO antiretroviral guidelines (discussed in section 4).

Major resources should be directed towards critical enablers and development synergies that reduce vulnerability and enhance the effectiveness, efficiency and reach of HIV prevention efforts. Such approaches should include legal reform, stigma reduction, legal services, rights literacy, sensitization of police and training of health care workers. Among the many populations who could benefit from critical enablers and development synergies, such funding is notably important for sex workers, men who have sex with men and other marginalized groups at high risk of HIV.

Rapidly scaling-up voluntary medical male circumcision in the United Republic of Tanzania

Benefiting from strong political commitment, strategic focusing of services, innovative marketing strategies and implementation of recommended human resource strategies, the United Republic of Tanzania has recorded rapid progress in its quest to deliver voluntary medical male circumcision services to at least 80% of previously uncircumcised adult men. By circumcising 1.4 million men, it is projected that the United Republic of Tanzania could avert 200 000 new HIV infections by 2025.

The circumcision campaign in the United Republic of Tanzania prioritizes scale-up in the Iringa and Njombe regions, where HIV prevalence (estimated at 16%) is three times the national average. Only one in three men in these regions has been circumcised. Geographic information systems and other methods have been used to track service uptake and to identify areas where scale-up is lagging, enabling programme implementers to reallocate human and financial resources as needed.

The United Republic of Tanzania has had enormous success in mounting time-limited campaigns that reach large numbers of men with circumcision services. A six-week campaign in Iringa in 2010 performed more than 10 000 circumcisions, exceeding the campaign target by 72%.[36]

Scale-up of voluntary medical male circumcision has been aided by implementation of task-shifting in service settings, reducing demands on the limited number of surgeons. According to the US Agency for International Development, nurses account for 70% of the 200 health providers working on circumcision scale-up.

Results achieved in recent years have been impressive, demonstrating the feasibility of rapid scale-up. As programmatic scale-up accelerated, the annual number of men circumcised in the United Republic of Tanzania rose from 1 033 in 2009 to 183 480 in 2012.

2. HALVE THE TRANSMISSION OF HIV AMONG PEOPLE WHO INJECT DRUGS BY 2015

Recent data suggest little change has occurred in the HIV burden among people who inject drugs. HIV incidence among this population remains high, with people who inject drugs accounting for more than 40% of new infections in some countries.

The prominence of injecting drug use as a driver of national HIV epidemics varies from country to country. In part, this is a result of substantial differences in the prevalence of injecting drug use around the world. As estimated by the United Nations Office on Drugs and Crime (UNODC), regional prevalence of injecting drug use ranges from less than 0.2% in sub-Saharan Africa to approximately 1.3% of adults in Eastern Europe and Central Asia. Globally, at least 158 countries reported injecting drug use and 120 countries have documented HIV among people who inject drugs.[1] According to recent modes of transmission analysis, people who inject drugs and their sexual partners accounted for 68% of new HIV infections in Iran (uncertainty range = 57–78%), 40% in Eastern European countries where such studies were conducted, and 36% in the Philippines.[2]

In several parts of the world where people who inject drugs represent sizable components of national epidemics, countries have yet to demonstrate a robust response to this public health challenge. In addition to lacking strong political and programmatic commitment to reduce HIV transmission among people who inject drugs, these countries also lack relevant data. Of the top four countries representing roughly 45% of the global injecting drug using population,[3] only China and Brazil reported this year; without data from Russia and the United States, it is difficult to make accurate global statements about people who inject drugs. Considerably greater efforts to implement evidence-based strategies and sound policy frameworks will be needed if the world is to achieve its goal of halving the number of new HIV infections among people who inject drugs.

THE EPIDEMIC'S ENDURING IMPACT ON PEOPLE WHO INJECT DRUGS

Although people who inject drugs account for an estimated 0.2–0.5% of the world's population, they make up approximately 5–10% of all people living with HIV.[4,5] All regions report high HIV prevalence in this population, although the severity varies. HIV prevalence among people who inject drugs ranged from 5% in Eastern Europe to 28% in Asia.

Monitoring HIV prevalence among people who inject drugs is challenging. Country reports of prevalence data in this population often differ by year and may rely on surveys that use different methodologies. In addition, extrapolation from setting-specific studies to estimate national prevalence among people who inject drugs can be difficult.

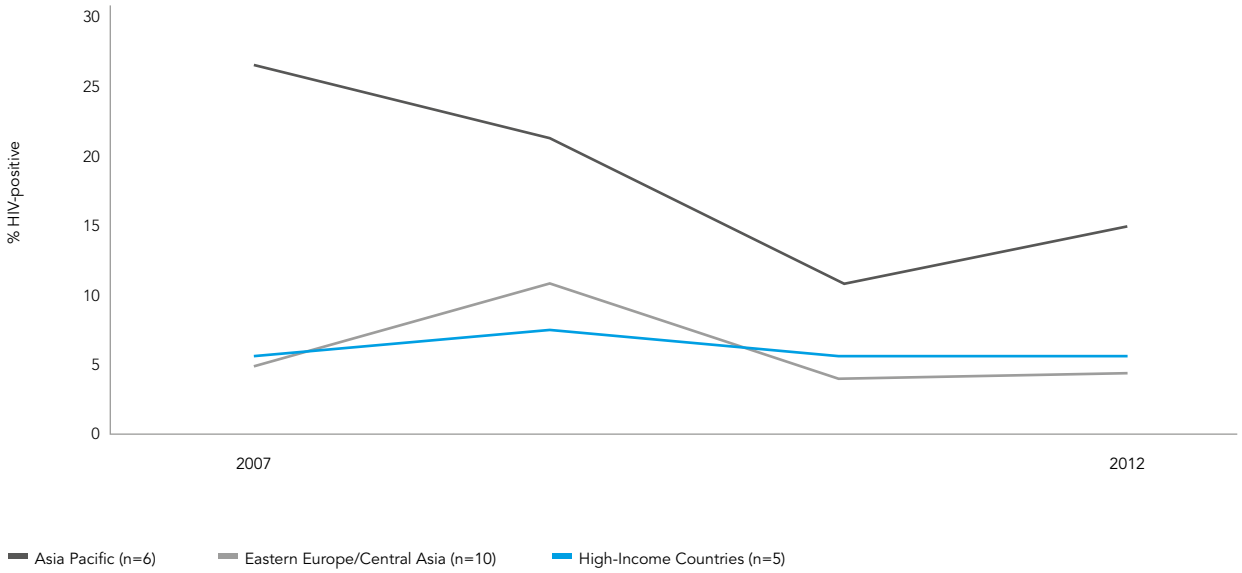
Fifty-one countries reported HIV prevalence data for people who inject drugs in 2012, although data are often derived from local surveys that are not nationally representative. Taking methodological challenges into account, there appears to be little change at the regional level in HIV prevalence among people who inject drugs although the recent trend in Asia Pacific is of concern (see Figure 2.1).

Among those countries with consistent reporting since 2009, HIV prevalence has declined in each. For example, in Eastern Europe and Central Asia – where HIV transmission related to injecting behaviour is driving many national epidemics – HIV prevalence among people who inject drugs appears to have fallen by more than half in Ukraine from 2007 to 2012, though this is likely attributable to changes in survey methods. HIV case reports among people who inject drugs in Ukraine remained relatively stable, with 6 500 to 7 000 per year in the same time period.[6] HIV prevalence in this population appears to have remained stable for other countries in Eastern Europe and Central Asia (see Figure 2.2). Median HIV prevalence among young (< 25) people who inject drugs was 3%, and 6% among older people who inject drugs; in Asia younger people who inject drugs had 9% HIV prevalence and older people 19%.

In Asia, available evidence also suggests that HIV prevalence among people who inject drugs has fallen since 2005–2007 in several countries, including Myanmar, Nepal and Vietnam. In Malaysia, the Philippines and Thailand have reported increasing HIV prevalence among people who inject drugs, while other Asian countries appear to have remained stable.

FIGURE 2.1

HIV median prevalence among people who inject drugs, by region, 2007–2012*

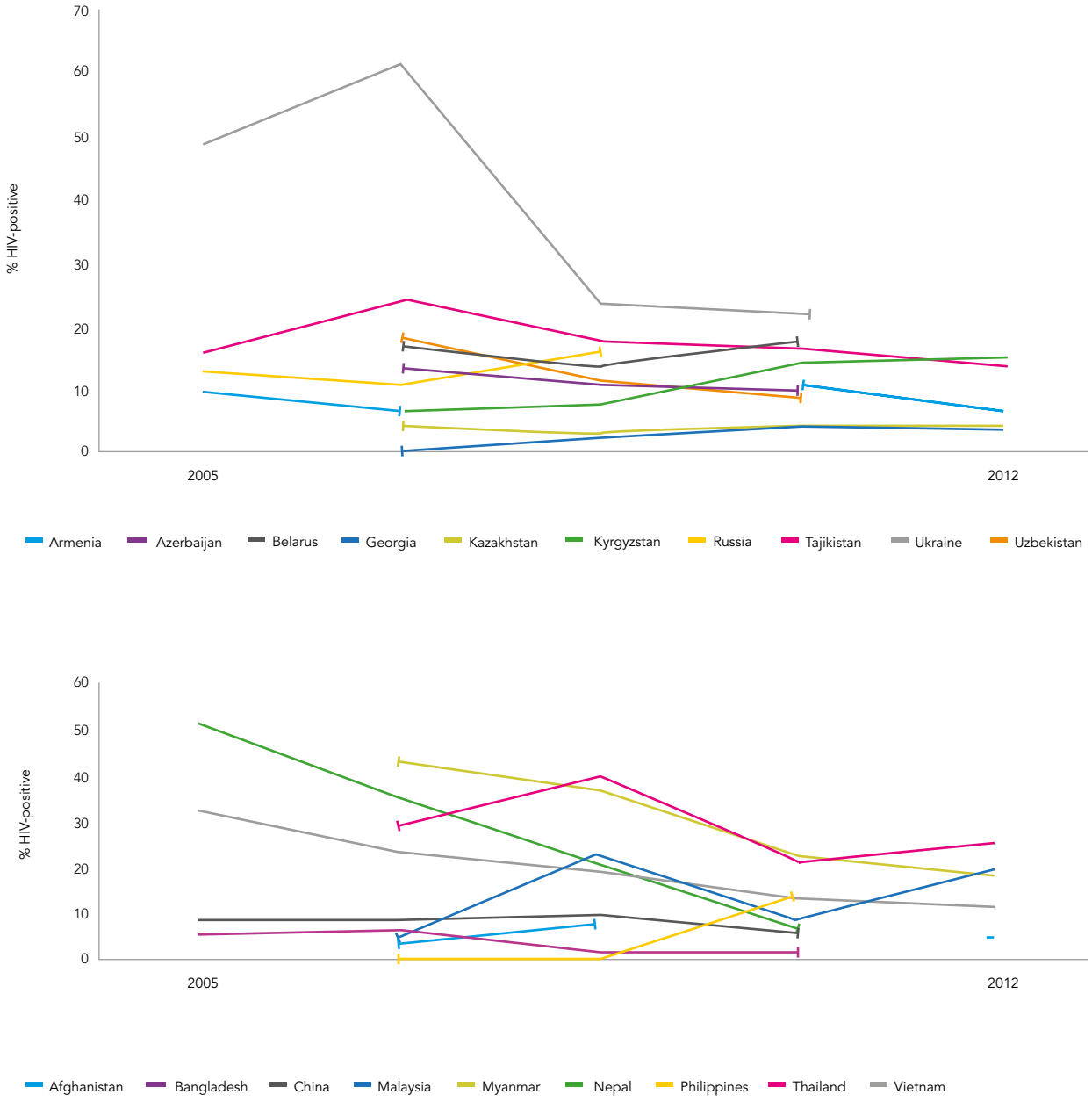


Source: GARPR 2013.

*See footnote to Figure 1.5.

FIGURE 2.2

HIV prevalence among people who inject drugs in Eastern Europe, Central Asia, East Asia and South-East Asia, selected countries, 2005–2012*



Source: GARPR 2013.

*See footnote to Figure 1.5.

THE STATE OF HIV PREVENTION SERVICES FOR PEOPLE WHO INJECT DRUGS

A package of HIV prevention, care and treatment services is recommended for the prevention of new HIV infections among people who inject drugs.[7] Recommended services include access to HIV testing and counselling, sterile injecting equipment (through needle and syringe programmes), opioid substitution therapy, antiretroviral therapy and other health and social services. People who inject drugs and their sexual partners also need counselling, education, behavioural interventions and access to condoms to prevent sexual transmission.

Coverage of HIV prevention services for people who inject drugs is quite low. Only in high-income countries does the annual number of syringes distributed per person who injects drugs approach the global recommendation of 200. Among 32 low- and middle-income countries reporting needle distribution in 2011 and 2012, only two countries with a significant epidemic among people who inject drugs, Bangladesh and Malaysia, reported more than 200 syringes per year (see Figure 2.3). Countries in Asia, overall, had higher needle distribution compared to other regions, while countries in the Middle East and North Africa showed expansion of needle distribution per person who injects drugs, with gains reported in Afghanistan, Iran and Morocco. Based on available data, overall coverage for needle and syringe programmes did not appear to have meaningfully increased between 2011 and 2012.

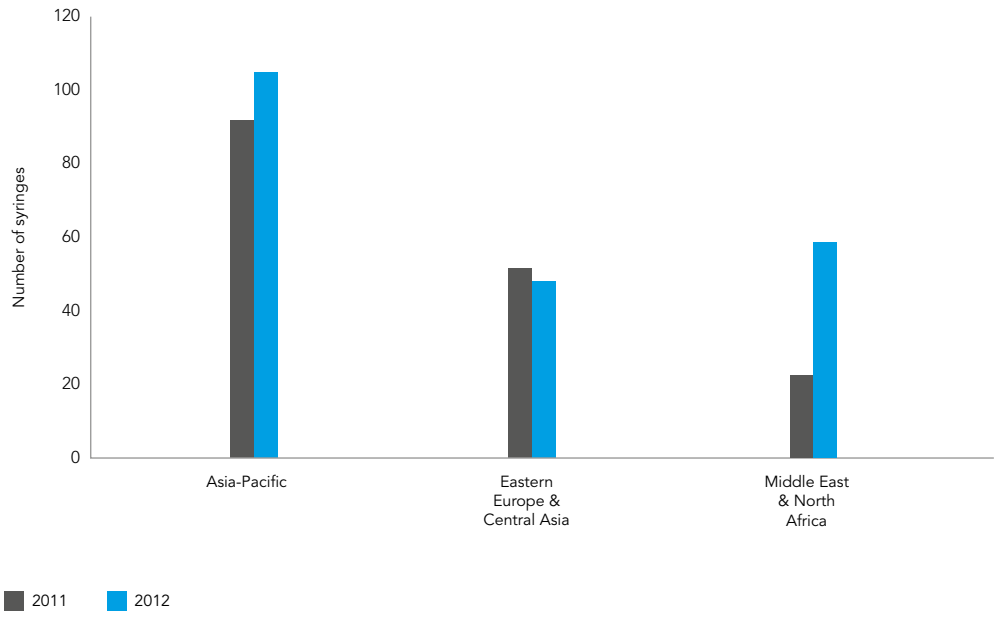
Data on opiate substitution therapy were reported by 35 countries (11 in Asia and 15 in Eastern Europe and Central Asia), with over 400 000 receiving methadone. Among the 20 countries providing coverage estimates for opioid substitution therapy, coverage ranged from less than 1% of opiate users in several countries to 26% in Malaysia, with all but four countries reporting coverage of less than 10%.

Despite persistent low programmatic coverage, surveys indicate that more people who inject drugs report having used sterile equipment the last time they injected. It is possible that people who inject drugs access clean needles and syringes through channels other than needle and syringe programmes. With the exception of Latin America, Asia and the Pacific, survey data indicate that at least 70% of people who inject drugs used sterile equipment during their most recent episode of injecting drug use. In 2012, out of 40 reporting countries, 23 reported having reached the global target of 80% for use of sterile injecting equipment.

In all regions, the median proportion of people who inject drugs who report using a condom the last time they had sex was less than 50%. Substantially greater success in reaching people who inject drugs with effective sexual risk reduction strategies will be needed to reduce sexual transmission from people who inject drugs to their sexual partners.

FIGURE 2.3

Number of syringes distributed by needle and syringe programmes, per person who injects drugs per year, by region, 2011–2012*



Source: GARPR 2013.

*See footnote to Figure 1.5.

RESOURCE CHALLENGES FACING AN EFFECTIVE RESPONSE TO HIV FOR PEOPLE WHO INJECT DRUGS

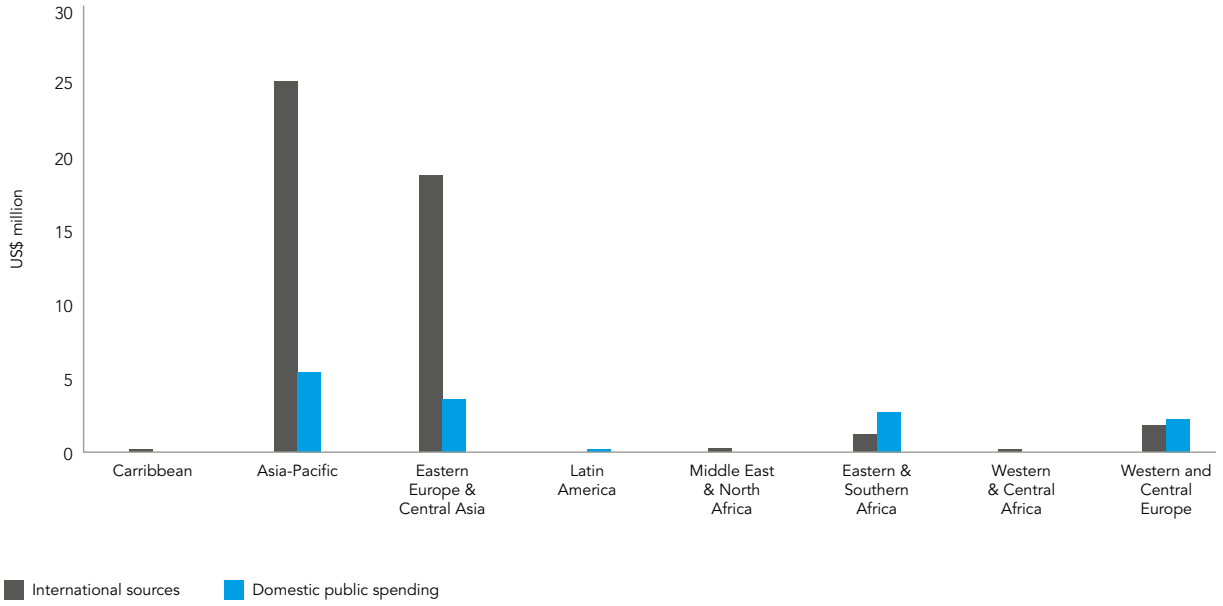
Given the severity of the challenge, HIV prevention programming for people who inject drugs is badly under-resourced. Only two regions – Eastern Europe and South and South-East Asia – have large-scale funding in place for harm reduction services. In these regions, as well as globally, international donors account for the overwhelming majority of funding for harm reduction services (see Figure 2.4).

The degree of domestic financing for harm reduction services is closely correlated with national income level. Whereas domestic funding accounts for 10% of harm reduction funding in low-income countries, domestic sources fund 18% and 36% of harm reduction services in lower-middle and upper-middle income countries, respectively.

Several countries have allocated a substantial share of national HIV spending to harm reduction services. Programmes for people who inject drugs represent 31% of HIV spending in Macedonia, 23% in Pakistan, 18% in Georgia and 16% in Bangladesh.

FIGURE 2.4

International and domestic public spending for harm reduction programmes for people who inject drugs in low- and middle-income countries, by region, latest data available (2007–2012)



Source: GARPR 2013.

However, funding lags in a number of countries where HIV prevalence among people who inject drugs is high. Ten countries in which HIV prevalence among people who inject drugs exceeds 10% allocate less than 5% of HIV spending to harm reduction programmes.

LOOKING FORWARD

Among the 109 countries that reported results from mid-term reviews, 45 identified prevention of HIV among people who use drugs as a national priority, with all but one country having recognized this target in their national strategic plans. A majority (27, or 60%) of these 45 countries report that they are on track to reduce new infections among people who inject drugs by 50% by 2015 – a conclusion that does not appear to be supported by available data on HIV prevalence and prevention-related indicators.

Countries that undertook mid-term reviews reported numerous impediments to effective HIV prevention for people who inject drugs. Even in countries where the national HIV epidemic is heavily concentrated among people who inject

drugs, there are often no reliable estimates of the size of this population. Uptake of voluntary HIV testing and counselling is extremely low among people who inject drugs, and criminalization, stigma and discrimination deter individuals from seeking services.

Funding for services to address the HIV-related needs of people who inject drugs is likely to pose a particular challenge. Several countries, such as Armenia, currently receive grant funding for harm reduction services from the Global Fund to Fight AIDS, Tuberculosis and Malaria, but such support is scheduled to expire in 2015. As many of the countries with epidemics driven by injecting drug use are middle-income, other international financing sources for HIV programmes are likely to be quite limited. It is vital that countries recognize the public health importance of these programmes and step forward with new financing.

National ownership of the HIV response for people who inject drugs is critical. Currently, many countries have yet to face up to the gap between current responses and the agreed target of halving new infections among people who inject drugs by 2015. In Central Asia, for example, seven out of eight countries report that they are 'on target' to achieve the 50% target, even though draconian policy and legislative obstacles, and low service coverage, prevent meaningful HIV prevention for many people who inject drugs in many countries in the region.

While countries that have introduced needle and syringe programmes, opioid substitution therapy and other harm reduction components should be applauded, urgent attention is now needed to bring these services to scale. In Azerbaijan, only 68 people are receiving opioid substitution therapy. In Georgia and Kazakhstan, the figures are 650 and 207 people, respectively – a tiny fraction in each country of the number of people who need the service.

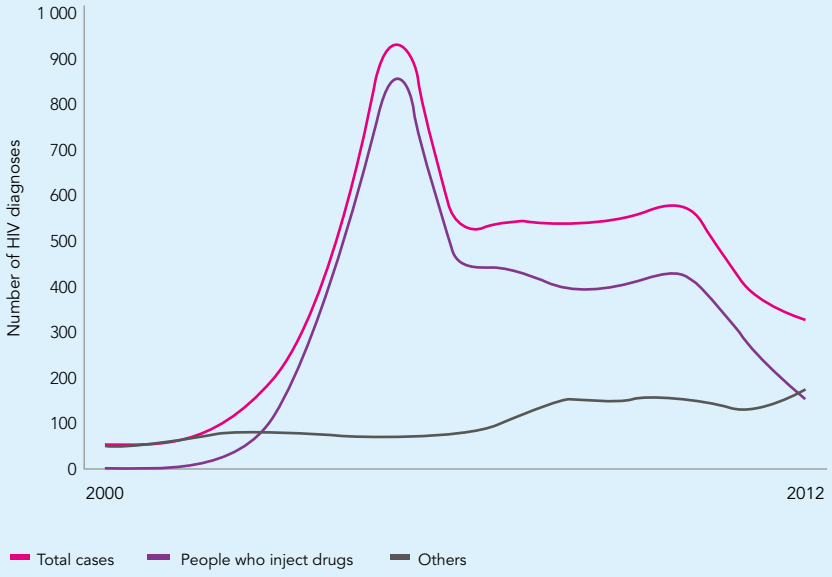
Scaling up harm reduction in Mauritius

HIV transmission through injecting drug use plays a critical role in the national epidemic in Mauritius (see Figure 2.5). In 2011, it was estimated that 51.6% of the country's 10 000 people who inject drugs were living with HIV, with a particularly heavy concentration in Port Louis. In 2012, a separate study determined that 22.3% of the 9 125 sex workers in the country were living with HIV, with 40% of sex workers also injecting drugs. People who inject drugs account for 40% of prison inmates, a population with an estimated HIV prevalence in 2012 of 24.8%.

Mauritius demonstrates the potential for political will to expedite service scale-up and dramatically improve health outcomes for people who inject drugs. Following the introduction of large-scale harm reduction measures in 2006, the proportion of estimated HIV transmissions stemming from injecting drug use fell from 92% in 2005 to 47% in 2012. Harm reduction coverage is much higher in Mauritius than in many other countries – 25% for needle and syringe programmes, 60% for opioid substitution therapy and 75% for antiretroviral therapy.

FIGURE 2.5

HIV diagnoses among people who inject with drugs and other populations, Mauritius, 2000–2012



Source: Mauritius National AIDS Secretariat (2013). National Strategic Framework for HIV and AIDS 2013–2016, p. 30.

3. ELIMINATE HIV INFECTIONS AMONG CHILDREN AND REDUCE MATERNAL DEATHS

As a result of sustained progress in scaling up services to prevent mother-to-child transmission, the world is within reach of key components of the push to eliminate new infections among children. If scale-up is continued, it is possible to provide services to 90% of pregnant women living with HIV by 2015 to prevent mother-to-child transmission of HIV. If other services to end vertical transmission and safeguard maternal health are accelerated (see box below), it will be possible to reduce the number of new HIV infections among children by 90%. To keep mothers alive and healthy, continued progress is needed in scaling up antiretroviral therapy.

GAINS IN SCALING UP ANTIRETROVIRAL MEDICINES FOR PREGNANT WOMEN

As of December 2012, over 900 000 pregnant women living with HIV globally received antiretroviral prophylaxis or treatment. Coverage of antiretroviral programmes for prevention of mother-to-child transmission (excluding the less-effective single dose nevirapine regimen) increased from 57% (51–64%) in 2011 to 62% (57–70%) in 2012. Four priority countries (Botswana, Ghana, Namibia and Zambia) have already met the goal of providing antiretroviral medicines to 90% of pregnant women living with HIV.

Priority countries of the Global Plan towards the elimination of new infections among children by 2015 and keeping their mothers alive:

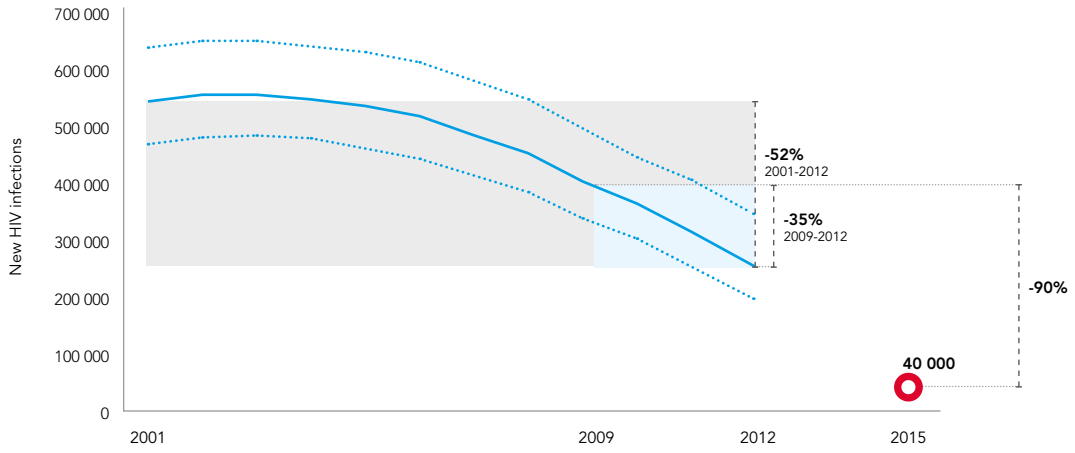
1. Angola
2. Botswana
3. Burundi
4. Cameroon
5. Chad
6. Côte d'Ivoire
7. Democratic Republic of the Congo
8. Ethiopia
9. Ghana
10. India
11. Kenya
12. Lesotho
13. Malawi
14. Mozambique
15. Namibia
16. Nigeria
17. South Africa
18. Swaziland
19. Uganda
20. United Republic of Tanzania
21. Zambia
22. Zimbabwe

IMPACT OF SCALED-UP ANTIRETROVIRAL PREVENTION SERVICES

As a result of scaled-up HIV prevention services, the annual number of newly infected children in 2012 was 260 000 (230 000 – 320 000) in low- and middle-income countries, 35% lower than in 2009 (see Figure 3.1). From 2001 to 2012, there was a 52% decline in new HIV infections among children. Expanded access to services to prevent mother-to-child transmission prevented more than 670 000 children from acquiring HIV from 2009 to 2012. To reach the global target of reducing by at least 90% the number of new infections among children by 2015 (using a 2009 baseline), programme expansion will need to accelerate.

Low- and middle-income countries that are now approaching the low HIV transmission rates among children seen in high-income countries have achieved this by providing high coverage of services for pregnant women living with HIV, to prevent mother-to-child transmission of HIV. In Ghana, for example, the risk that a woman living with HIV will transmit the virus to her child has declined from 31% in 2009 to 9% (7–11%) in 2012. The coverage of services for women living with HIV, to prevent mother-to-child transmission in Ghana, increased dramatically from 32% (27–38%) in 2009 to more than 90% in 2012.

FIGURE 3.1
Number of new HIV infections among children in low- and middle-income countries, 2001–2012 and 2015 target



Source: UNAIDS 2012 estimates

Key elements of eliminating new HIV infections among children and keeping their mothers alive

The Global Plan towards the elimination of new infections among children by 2015 and keeping their mothers alive recommends a set of priority actions under four key programmatic components:

1. Preventing new HIV infections among women of reproductive age.

2. Helping women living with HIV avoid unintended pregnancies.

3. Ensuring that pregnant women have access to HIV testing and counselling; and that those who test positive have access to antiretroviral medicines to prevent transmission during pregnancy, delivery or breastfeeding.

4. Providing HIV care, treatment and support for women, children living with HIV and their families.

The Global Plan prioritizes scale-up in 22 priority countries that collectively account for almost 90% of pregnant women living with HIV

LAGS IN COVERAGE OF ANTIRETROVIRAL PREVENTION SERVICES FOR PREGNANT WOMEN

Among regions, there is considerable variation in the coverage of prevention services for pregnant women living with HIV. Coverage is highest in Eastern and Central Europe and the Caribbean (more than 90%), while coverage is much lower in Asia and the Pacific and the Middle East and North Africa (less than 20%). Among

the 21 sub-Saharan African countries prioritized by the Global Plan, antiretroviral medicines were provided during pregnancy for the prevention of new HIV infections among children to 65% (57–70%) of pregnant women living with HIV compared to 62% (57–70%) in all low- and middle-income countries overall (see Table 3.1).

TABLE 3.1

Coverage of antiretroviral prevention services for pregnant women living with HIV in generalized epidemic countries, 2012

Less than 50%	50–79%	80% and above
Angola	Burkina Faso	Botswana
Benin	Burundi	Ghana
Chad	Cameroon	Haiti
Congo	Côte d'Ivoire	Liberia
Democratic Republic of the Congo	Gabon	Mozambique
Djibouti	Kenya	Namibia
Eritrea	Lesotho	Rwanda
Ethiopia	Malawi	Sierra Leone
Guinea	Uganda	South Africa
Guinea-Bissau	United Republic of Tanzania	Swaziland
Nigeria		Togo
Papua New Guinea		Zambia
South Sudan		Zimbabwe

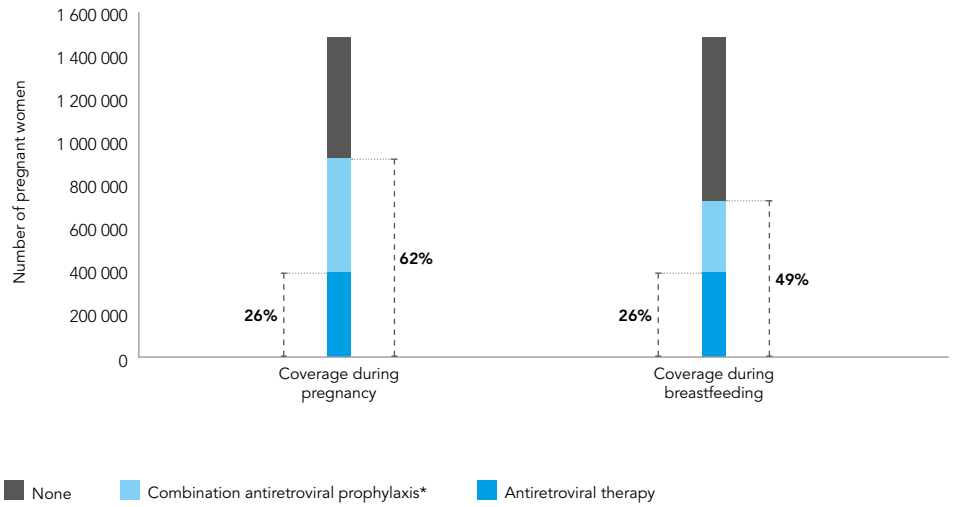
Source: UNAIDS 2012 estimates

While many countries have made historic strides in expanding access to antiretroviral medicine for pregnant women living with HIV, progress has been much slower in other countries. As of December 2012, 13 countries with generalized epidemics – including five priority countries (Angola, Chad, Democratic Republic of the Congo, Ethiopia and Nigeria) – reached less than 50% of pregnant women living with HIV with antiretroviral medicines to prevent vertical transmission. Although vertical transmission prevention coverage among pregnant women living with HIV typically trends upwards, even in settings where sub-optimal coverage prevails, notable declines in coverage occurred in Lesotho (from 75% in 2011 to 58% in 2012) and Kenya (66% to 53%), while it stalled in Angola (17% in both years).

Breastfeeding women living with HIV are advised to use antiretroviral medicines when breastfeeding their newborns. In 2012, antiretroviral coverage was substantially lower during the breastfeeding period (49%) than during pregnancy and delivery (62%). It is now estimated that half of all new episodes of HIV transmission to children occur during the breastfeeding period when the majority of lactating women are not receiving the prophylaxis necessary to prevent HIV transmission (see Figure 3.2).

FIGURE 3.2

Number and percentage of HIV-positive pregnant women in low- and middle-income countries who received antiretroviral medicine to prevent new HIV infections among children, during pregnancy and breastfeeding, 2012



Source: UNAIDS 2012 estimates

* The 2006 WHO guidelines proposed starting ARV prophylaxis in the third trimester of pregnancy, with a regimen of twice daily zidovudine (AZT), single-dose nevirapine (NVP) at onset of labour, a combination of AZT+3TC during delivery and one week postpartum, as well as infant prophylaxis for one week after birth. The 2010 guidelines introduced options A and B, which should start earlier in pregnancy. Option A is twice-daily AZT for the mother and infant prophylaxis with daily NVP infant prophylaxis for one week after the end of the breastfeeding period, or either AZT or NVP for six weeks after birth if the infant is not breastfeeding. Option B is a three-drug prophylactic regimen for the mother taken during pregnancy and throughout the breastfeeding period, as well as infant prophylaxis for six weeks after birth, whether or not the infant is breastfeeding. http://www.who.int/hiv/pub/mtct/PMTCTfactsheet/en/

PERSISTENT GAPS IN KEY ELEMENTS OF PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION

While access to antiretroviral medicines to prevent mother-to-child HIV transmission has increased, progress has been more modest on other programmatic aspects of the Global Plan, including primary HIV prevention for women. The number of women newly infected with HIV declined by 44% from 2009 to 2012 in Ghana, by 23% in Uganda and by 21% in South Africa. In other priority countries, however, the decline in the number of new HIV infections among women has decreased more slowly or even stalled, and remains at high levels. Globally, the pace of decline in new HIV infections among women has slowed since 2008, underscoring the need for intensified efforts to prevent new HIV infections among women and their sexual partners.

The unmet need for family planning services among women living with HIV continues to undermine efforts to eliminate new HIV infections among children. For women globally, unmet need for family planning declined from 15.4% in 1990 to 12.3% in 2010, according to a recent review of nationally representative surveys.[1] In East Africa and West Africa, however, more than 20% of women had an unmet need for family planning services, with no reduction in unmet need reported for 1990–

2010. This means that more than one in five women in the region express the desire to delay or stop childbearing, but are not using contraception. In addition to reducing the risks of HIV acquisition among children, rights-based prevention of unintended pregnancies also helps improve maternal morbidity and reduces maternal deaths.

TREATMENT COVERAGE DEFICITS FOR PREGNANT WOMEN

Among pregnant women who needed antiretroviral therapy for their own health in 2012, 58% received HIV treatment – lower than the 64% (61-69%) treatment coverage for adults overall. In ten priority countries in 2012, fewer than half of pregnant women living with HIV and with CD4 counts equal to or lower than 350 cells per microlitre (the threshold for HIV treatment initiation under the earlier 2010 World Health Organization (WHO) antiretroviral treatment guidelines) received antiretroviral therapy for their own health. However, the gap between pregnant women and all adults is declining as new guidelines are being rolled out on the importance of starting pregnant women on antiretroviral therapy.

To spur accelerated HIV treatment scale-up, Malawi has begun systematically offering lifelong antiretroviral therapy to pregnant women living with HIV (Option B+), leading to a 7.5-fold increase in the number of such women receiving therapy over a 15-month period in 2011–2012.[2] In 2013, WHO issued new consolidated guidelines for use of antiretroviral medicines for HIV treatment and prevention, recommending initiation of lifelong antiretroviral therapy for all pregnant and breastfeeding women living with HIV, regardless of their CD4 count.

National empirical data on maternal mortality are rare as the result of various monitoring challenges, including the frequent lack of complete civil registration systems and the lack of reliable attribution of death in the civil registration systems that do exist. Most countries continue to rely on modelling to estimate maternal mortality and UNAIDS is working with partners to improve estimates of excess pregnancy-related mortality associated with HIV. However, current data suggest that, in high-prevalence countries, HIV contributes significantly to pregnancy-related mortality, and points at the urgent need to ensure that eligible women living with HIV receive complete treatment, and that HIV treatment services be integrated into sexual and reproductive health services. Recent research demonstrates that provision of antiretroviral therapy would avert much of the maternal mortality in countries with a heavy HIV burden.[3]

TREATMENT COVERAGE DEFICITS FOR CHILDREN

Children living with HIV continue to experience persistent treatment gaps. In 2012, 647 000 children under 15 years of age were receiving antiretroviral treatment. HIV treatment coverage for children (34% (31-39%)) remained half of coverage for adults 64% (61-69%)) in 2012. Although the number of children receiving antiretroviral therapy in 2012 increased by 14% in comparison to 2011, the pace of scale-up was substantially slower than for adults (a 21% increase). In priority countries, only three in 10 children receive HIV treatment.

The failure to expand access in many settings to early infant diagnosis is an important reason explaining why HIV treatment coverage remains much lower for children than for adults. In three priority countries, coverage of less than 5% was reported for early infant diagnostic services in 2012.

IMPROVING PROGRAMMATIC PERFORMANCE AND RESULTS

Since services to prevent mother-to-child transmission were launched, programme managers have struggled to find effective strategies to minimize the number of pregnant women who drop out of services at some point during the process. Until recently, receipt of antiretroviral medicines to prevent HIV transmission has tended to be the final service outcome that has been routinely monitored. Although programmatic aspirations today extend further, with the aim of ensuring HIV-free child survival, monitoring systems have not always kept pace. Key aspects of the service cascade for prevention of mother-to-child transmission, each of which requires rigorous data collection and analysis, include attendance at antenatal clinics, receipt of HIV test results, receipt of antiretroviral medicines during pregnancy and delivery, receipt of antiretroviral medicines during breastfeeding, infant feeding counselling and support, early diagnosis of HIV-exposed newborns, linking HIV-positive newborns to care, and survival for children living with HIV.

Improving both short- and long-term health outcomes for pregnant women living with HIV and their children requires the implementation of systems and protocols for the routine collection, analysis and strategic use of data across the breadth of the service cascade for prevention of mother-to-child transmission. Using such a data-driven approach, countries such as Malawi have gained an increased understanding of the impact of the service cascade and used these findings to inform programme development and implementation.

LOOKING TOWARDS 2015

Among 109 countries reporting results in the mid-term reviews, all but two identified elimination of new HIV infections among children and substantially reducing AIDS-related maternal deaths as a national priority. In all countries recognizing this target as a national priority, it has been integrated into national strategic plans. Although most mid-term reviews in all 22 Global Plan priority countries concluded that these countries are on track to reach the 2015 elimination target, the 2013 Global Plan progress report suggests that only about half of priority countries are on track to achieve the 2015 target. The report concluded that improving the situation would require a number of steps, including: reducing the number of women acquiring HIV infection, reducing the unmet need for family planning, increasing access to safe and noncoercive HIV testing, improving the availability of antiretroviral medicines for pregnant women living with HIV and improving the diagnosis and treatment of HIV among children.[4]

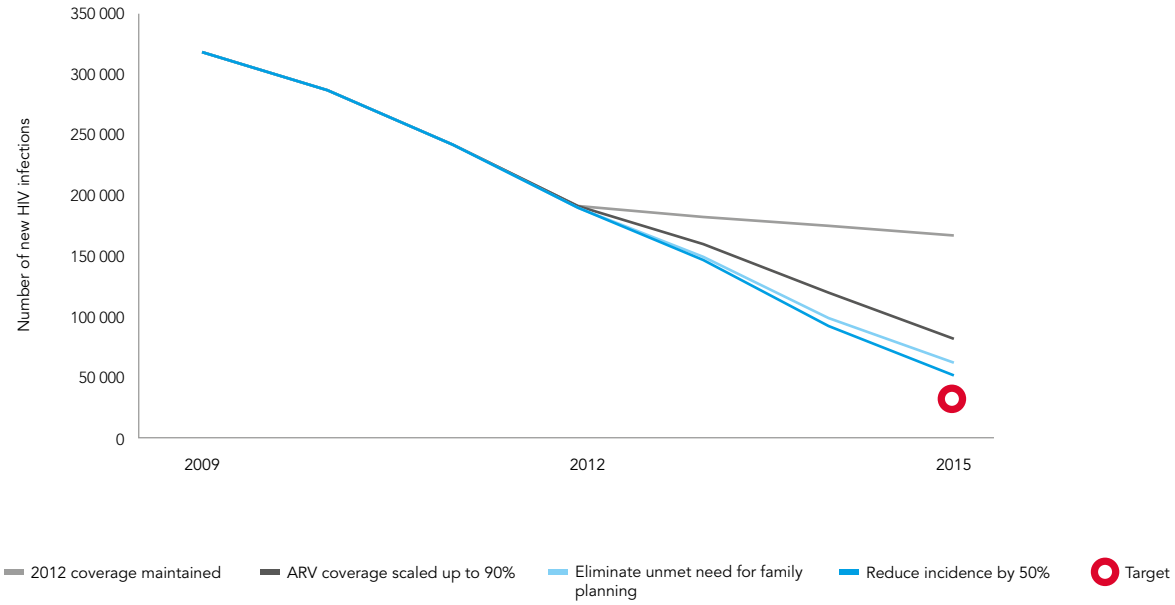
An updated analysis of what it will take to reach a 90% reduction in new child infections between 2009 and 2015 shows that, given the achievements by 2012 in the 21 sub-Saharan African Global Plan priority countries, significant effort and innovation will be needed to reach the target. If 90% of HIV positive pregnant women received combined ARV (50% started during the pregnancy and 40% started ART before the pregnancy) and 100% of those women received prophylaxis during breastfeeding HIV incidence was reduced by 50% among reproductive age women, and women living with HIV were able to meet their family planning needs the reduction in new child infections would still only reach an 83% reduction from 2009 levels in 2015. Additional efforts to reduce unmet need for family planning

among women living with HIV and to reaching higher levels of ARV coverage will allow countries to reach the goal of eliminating new child infections (see Figure 3.3).

National mid-term reviews noted several challenges to reaching the target of eliminating new HIV infections among children and substantially improving health outcomes for pregnant women living with HIV. These include operational issues (e.g. women's lack

FIGURE 3.3

Projected impact on new child HIV infections by programmes to prevent mother to child transmission, 21 Global Plan priority countries in sub-Saharan Africa, 2009–2015



Source: UNAIDS analysis 2013, data from 2013–2015 are projections

of awareness of services, loss of mother-baby pairs across the service cascade, insufficient male involvement, failure to identify many children exposed to HIV, stock-outs of key commodities, difficulties in implementing recommended policy changes for infant feeding, shortages of essential human and financial resources, and insufficient integration and decentralization of services), issues of programmatic reach (e.g. late diagnosis of many pregnant women, inadequate access to safe delivery and post-delivery follow-up, a high proportion of home deliveries in many countries) and policy issues (e.g. deterrent effects of stigma and discrimination). The Global Plan provides a framework to enable countries to critically examine existing barriers and improve service delivery and health outcomes for mothers living with HIV and their children.

During mid-term reviews, countries recognized the need to take action to speed scale-up and address programmatic shortcomings. Key actions include focused training and capacity building support for health care workers, further integration and decentralization of services, expanded access to early infant diagnosis, implementation of task shifting and other measures to address human resource challenges, and investment in programming to generate greater demand for services. Countries also cited the need to strengthen procurement and supply management systems, enhance community engagement, broaden efforts to promote the realization of women's human rights, and increase the investment of national governments in services to prevent mother-to-child transmission and in broader services for maternal and child health. A number of countries in sub-Saharan Africa reported planning to offer Option B+, for lifelong antiretroviral therapy to all pregnant women living with HIV.

While attention to date has primarily focused on scaling up HIV testing and counselling and antiretroviral prophylaxis in antenatal settings, countries cited an urgent need to improve results relating to other key aspects of the Global Plan. In particular, countries emphasized the importance of primary HIV prevention, reducing unmet need for family planning among women living with HIV and reaching HIV-positive breastfeeding women with prevention services. Modelling commissioned by UNAIDS indicates that integrating the continued scale-up of antiretroviral prophylaxis with strengthened primary prevention, achievement of high prevention coverage for breastfeeding women and elimination of the unmet need for family planning services would increase the likelihood of achieving the 2015 target compared to an approach that does not include these gains.

Cambodia's Boosted Linked Response

In 2008, Cambodia introduced the Linked Response initiative to reach all pregnant women by developing and utilizing linkages between existing HIV/STI and sexual and reproductive health services and mobilizing existing community based entities. Building on the success of this initiative, in 2013 Cambodia launched the Boosted Linked Response strategy to accelerate uptake of services to prevent mother-to-child transmission, reduce loss across the HIV prevention cascade, improve service quality and health outcomes for women living with HIV and their children and reduce deaths among mothers living with HIV and HIV-exposed children. The overarching goal of the Boosted Linked Response is to achieve the virtual elimination of new HIV infections among children, lowering the mother-to-child transmission rate to less than 5% in 2015 and to less than 2% by 2020. The Boosted Linked Response also seeks to reduce the incidence of congenital syphilis to 0.5 cases per 1 000 live births.

The Boosted Linked Response calls for focused programmatic action[5] to:

- Increase access to antenatal care for pregnant women.
- Increase coverage of HIV and syphilis testing for pregnant women.
- Improve early service uptake and retention of pregnant women infected with HIV and/or syphilis throughout the prevention cascade.
- Improve the health, dignity and access to prevention of women living with HIV or at high risk of acquiring HIV.
- Reduce loss to follow-up among HIV-exposed infants to optimize antiretroviral prophylaxis and ensure early infant diagnosis through HIV DNA-PCR testing.
- Ensure rapid enrolment of infants living with HIV in paediatric HIV care.

4. REACH 15 MILLION PEOPLE LIVING WITH HIV WITH LIFESAVING ANTIRETROVIRAL TREATMENT BY 2015

Sustained progress in scaling up access to HIV treatment has put within reach the goal of providing antiretroviral therapy to 15 million people by 2015. However, access to treatment varies considerably within and between countries and regions, with especially poor coverage for children.

Antiretroviral therapy can help to prevent people living with HIV from dying from AIDS and from developing tuberculosis, becoming ill and transmitting tuberculosis and HIV. Emerging science indicates that people should start HIV treatment earlier to realize these benefits. The new HIV treatment guidelines provided by the World Health Organization (WHO), issued in June 2013, recommend starting treatment when an individual's CD4 count falls below 500 cells/μL and immediately for pregnant women, HIV-positive partners in serodiscordant couples, children younger than five and people with HIV-associated tuberculosis and Hepatitis B. The 2013 WHO guidelines on HIV treatment will require substantially faster scale-up, coupled with innovation and programmatic adaptation, to ensure that those who are eligible for HIV treatment receive it.

In July 2013, UNAIDS joined with WHO, the US President's Emergency Plan For AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, tuberculosis and Malaria and other partners to launch the *Treatment 2015* initiative, which aims to ensure that the world reaches its 2015 HIV treatment target as a critical stepping-stone towards universal treatment access. *Treatment 2015* emphasizes *speed* in scaling up, enhanced strategic *focus* to intensify scale-up in key geographic areas and populations, and *innovation* in programme planning and service delivery.

Countries where 90% of the people with an unmet need for antiretroviral treatment live:

1. Angola
2. Brazil
3. China
4. Cameroon
5. Central African Republic
6. Chad
7. Colombia
8. Côte d'Ivoire
9. Democratic Republic of the Congo
10. Ethiopia
11. Ghana
12. India
13. Indonesia
14. Kenya
15. Lesotho
16. Malawi
17. Mozambique
18. Myanmar
19. Nigeria
20. Russian Federation
21. South Africa
22. South Sudan
23. Thailand
24. Togo
25. Uganda
26. Ukraine
27. United Republic of Tanzania
28. Viet Nam
29. Zambia
30. Zimbabwe

CONTINUED PROGRESS IN 2012

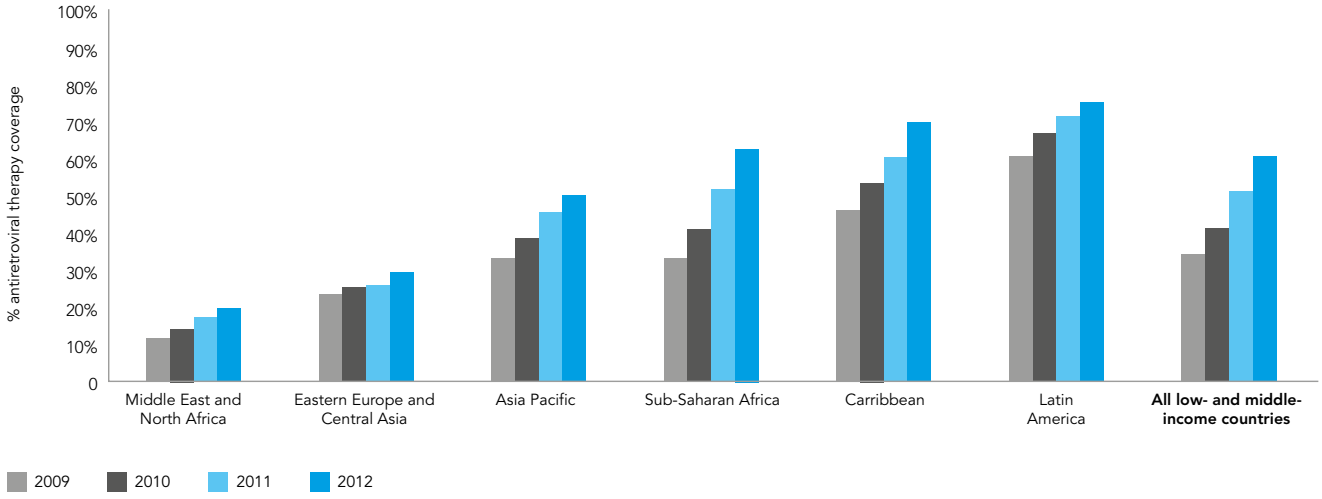
As of December 2012, an estimated 9.7 million people in low- and middle-income countries were receiving antiretroviral therapy, an increase of 1.6 million over 2011. That brings the world nearly two-thirds of the way towards the 2015 target of 15 million people accessing antiretroviral treatment. Under the 2010 WHO guidelines, 61% (57–66%) of all persons eligible for HIV treatment in low- and middle-income countries had obtained antiretroviral therapy in 2012 (see Figure 4.1). Taking into account the 875 000 people receiving antiretroviral therapy in high-income countries, a total of 10.6 million people were receiving antiretroviral therapy as of December 2012. However, under the 2013 WHO guidelines,

the 9.7 million people receiving antiretroviral therapy in low- and middle-income countries represents only 34% (32-37%) of the 28.6 (26.5-30.9) million people eligible in 2013.

It is increasingly clear that everyone infected with HIV will eventually need treatment. With an estimated 35.3 (32.2–38.8) million people now living with HIV, this represents a significant need to scale up HIV testing and treatment, while continuing to invest in prevention and other programmes to combat new HIV infections.

FIGURE 4.1

Percentage of people eligible who are receiving antiretroviral therapy (based on 2010 WHO guidelines) in low- and middle-income countries, by region, 2009–2012



Source: UNAIDS 2012 estimates.

Globally, the number of people receiving antiretroviral treatment has tripled over the last five years. Since 2005, sharp increases in the number of people receiving antiretroviral treatment have occurred in all regions of the world, with the exception of Eastern Europe, Central Asia, the Middle East and North Africa.

National mid-term reviews highlighted several approaches that have proven effective in spurring accelerated HIV treatment scale-up. Bringing services closer to people living with HIV through decentralization has improved treatment uptake. Establishment and updating of clinical protocols have enhanced the quality of care and strengthened HIV treatment capacity. In the face of limited human resources for health, many countries have successfully implemented task shifting in clinical settings, with nurses administering antiretroviral therapy. Efforts to maximize existing human resources for health need to be combined with intensified efforts to train and deploy new physicians, nurses, community health workers and other health personnel.

PERSISTENT DEFICITS IN COVERAGE

Although progress in scaling up HIV treatment is genuine, health gains from antiretroviral therapy are unevenly shared as a result of substantial variations in treatment access.

As Section 3 explained, HIV treatment coverage for children is a little more than half that of adults. In nine of the 22 countries prioritized by the Global Plan in relation to the elimination of new infections among children by 2015 and efforts to keep their mothers alive, 25% or less of treatment-eligible children received antiretroviral therapy in 2012.

In most regions, including sub-Saharan Africa, HIV treatment coverage for men is lower than coverage among women. In low and middle income countries, 57% of treatment-eligible men received antiretroviral therapy in 2012, compared to 73% of treatment-eligible women.

Key populations also experience unique barriers to HIV treatment, often as the result of fears that they will experience discrimination if they seek services in mainstream health settings. Although reliable HIV treatment coverage estimates are not available for men who have sex with men, people who inject drugs, sex workers or transgender individuals, previous reports indicate that these populations face substantial barriers to essential health services and experience extremely low HIV treatment coverage. A lack of clear commitments to scale-up coverage for many key populations has contributed to the neglect of their needs in the establishment and expansion of HIV treatment services.

People affected by humanitarian crises confront unique barriers to health care access, including concerns regarding confidentiality, denial of access to asylum procedures, fears regarding refoulement and restrictions on freedom of movement. Globally, there were an estimated 45.2 million refugees in 2012, including 26.4 million internally displaced persons.[1] Adolescents (10–19 years) are the only age group in which AIDS deaths have risen between 2001 and 2012. This trend in AIDS deaths is a result of poor prioritization of adolescents in strategic plans for scale-up of HIV treatment and lack of testing and counselling.

IMPACT OF SCALED-UP ANTIRETROVIRAL THERAPY

By reducing the virus circulating within a setting or population, scaled-up antiretroviral therapy helps reduce the number of new HIV infections. From 1995 to 2012, antiretroviral therapy averted 6.6 million AIDS-related deaths worldwide, including 5.5 million deaths in low- and middle-income countries (see Figure 4.2).

Where antiretroviral therapy has been scaled up, clear health gains have resulted. In 2011, life expectancy in the KwaZulu-Natal province of South Africa was 11.3 years higher than in 2003, when HIV treatment scale-up began.[2]

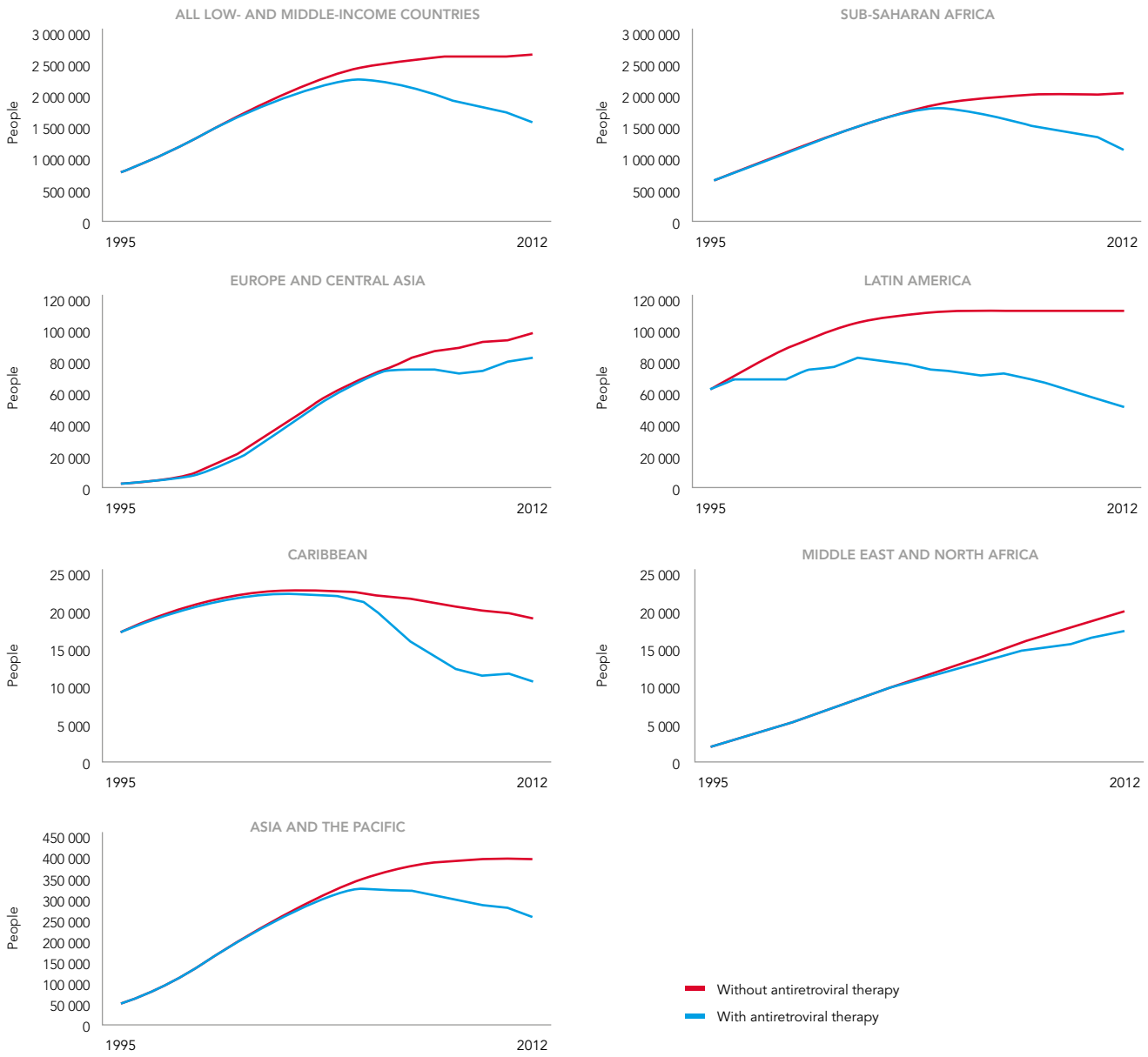
Investment in antiretroviral therapy is cost-effective and may also result in cost savings. Recent economic analysis found that investment in HIV treatment services generates economic returns up to three times greater as a result of increased employment and productivity and averted or deferred future expenses for medical services and care of orphans.[3]

Declines in the annual number of AIDS-related deaths illustrate the powerful health benefits of scaled-up antiretroviral treatment. From a high of 2.3 (2.1–2.6) million in 2005, the annual number of AIDS-related deaths fell to 1.6 (1.4–1.9) million in 2012. Despite the slow increase in antiretroviral treatment coverage among children aged 0–14 years, AIDS-related deaths among children have declined more quickly due to the impact of efforts to prevent mother-to-child transmission. In 2012, 210 000 (190 000 – 250 000) children died of AIDS-related causes, compared to 320 000 (290 000 – 360 000) in 2005.

Scaled-up antiretroviral therapy has the potential to dramatically alter the trajectory of national epidemics, lowering viral loads within communities and thereby slowing the spread of HIV. Further scale-up will be required to maximize the impact of HIV treatment and help create a foundation for ending the AIDS epidemic. A recent analysis by Futures Institute estimates that achieving 80% of the HIV treatment coverage recommended by the 2013 antiretroviral guidelines would lower the annual number of adults acquiring HIV from 2.4 million in 2011 to 800 000 in 2025 (compared to the 1.25 million suggested by the 2010 guidelines).[4]

FIGURE 4.2

Estimated number of AIDS-related deaths, with and without antiretroviral therapy, in low- and middle-income countries, and by region, 1995–2012



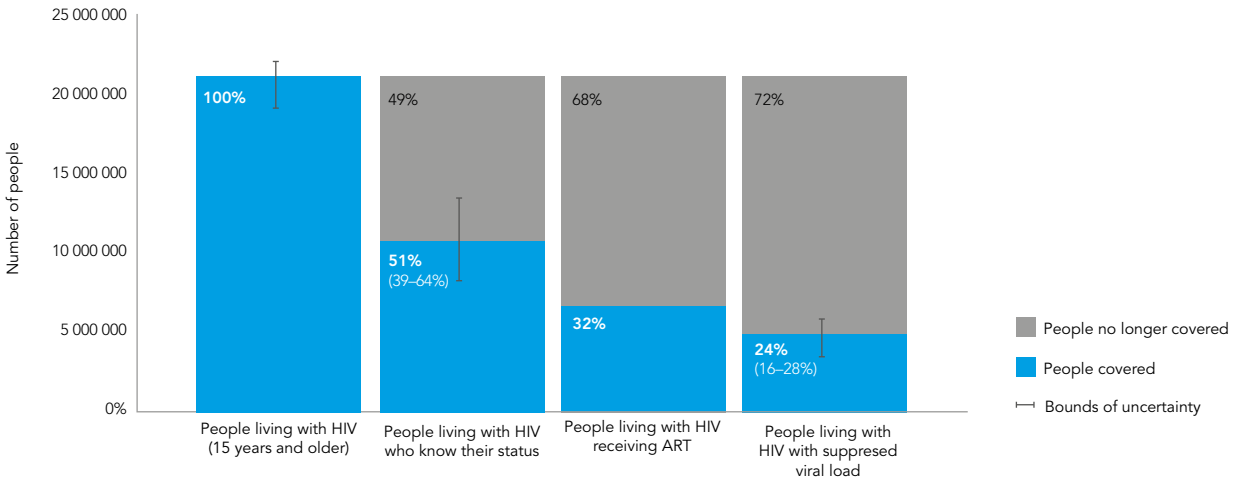
Source: UNAIDS 2012 estimates.

CLOSING GAPS IN THE HIV TREATMENT CASCADE TO MAXIMIZE ITS PUBLIC HEALTH IMPACT

Over the years, the goal of antiretroviral treatment has expanded to include not only prevention of AIDS-related morbidity and mortality but also prevention of HIV transmission. The public health and clinical goal is to ensure that everyone living with HIV knows their status, accesses care and treatment, and achieves sustained viral suppression. However, despite the ongoing scale-up of antiretroviral therapy, HIV transmission and AIDS-related mortality remain high in many parts of the world. In the quest to optimize HIV treatment, the HIV treatment cascade has emerged as an important tool that graphically illustrates key transitions in the HIV treatment continuum and how each of these steps affects the ultimate aim of ensuring viral suppression.

To achieve viral suppression, an individual must be diagnosed with HIV, linked to care, remain engaged in care and receive antiretroviral therapy where medically indicated. Although the number of people receiving antiretroviral therapy continues to rise in sub-Saharan Africa, helping lower rates of HIV-related illness and death, the region has yet to experience the full potential benefit of HIV treatment. In sub-Saharan Africa, it is estimated that approximately three-quarters of adults living with HIV have not achieved viral suppression as a result of gaps/shortfalls at each stage of the treatment cascade (see Figure 4.3).

FIGURE 4.3
Abbreviated HIV treatment cascade for sub-Saharan Africa, 2012



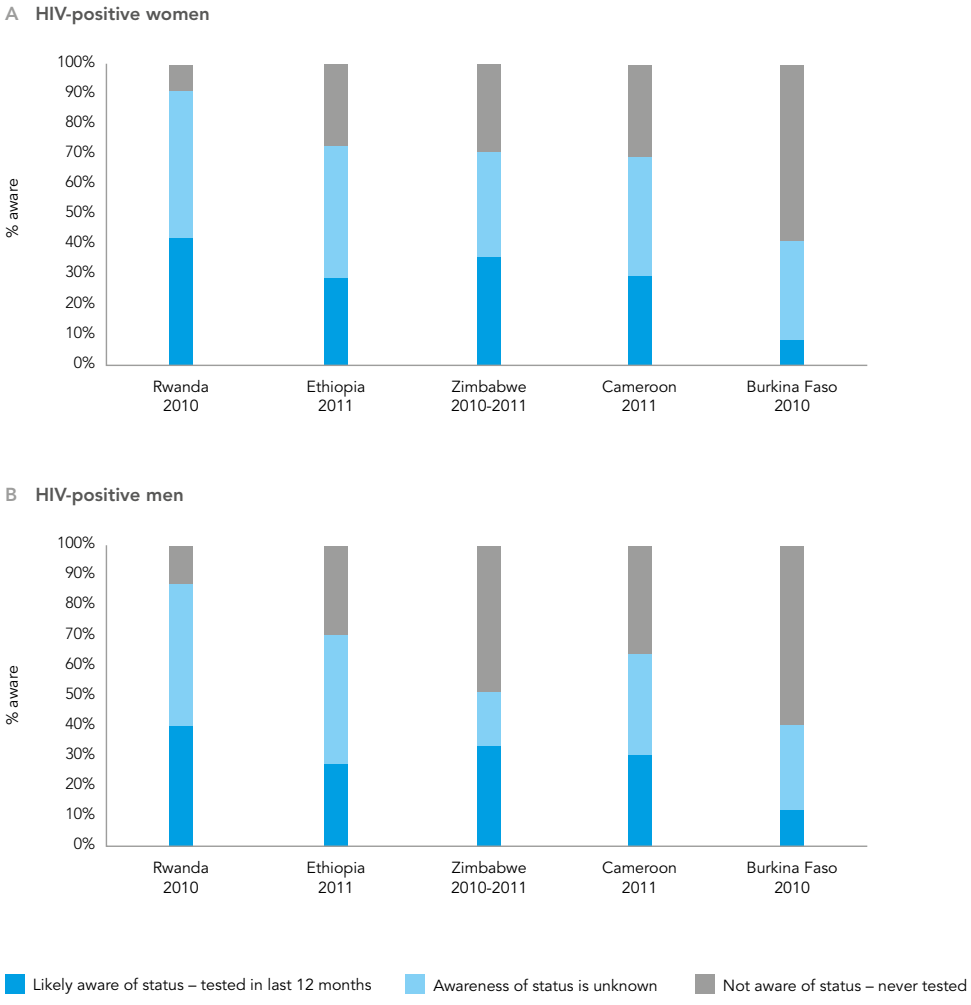
Sources:
1. UNAIDS 2012 estimates.
2. Demographic and Health Surveys, 2007–2011 (www.measuredhs.com) and one community based survey in South Africa (Kranzer, K., van Schaik, N., et al. (2011). High prevalence of self-reported undiagnosed HIV despite high coverage of HIV testing: a cross-sectional population based sero-survey in South Africa. *PLoS ONE* 6(9): e25244.) 51% is the mid-point between the low and high bounds. The low bound (39%) is the percentage of people living with HIV who are very likely to know their status – they tested positive in the survey and report receiving the results of an HIV test in the previous twelve months. The high bound (64%) is calculated as the percentage who tested positive in the survey and who self-report ever being tested for HIV (the test conducted in the survey is not disclosed to the recipients). Those persons who report never having been tested for HIV do not know their HIV status and make up the remaining 36%.
3. GARPR 2012.
4. Barth R E, van der Loeff MR, et al. (2010). "Virological follow-up of adult patients in antiretroviral treatment programmes in sub-Saharan Africa: a systematic review." *Lancet Infect Disease* 10(3): 155-166.

Notes: No systematic data are available for the proportion of people living with HIV who are linked to care, although this is a vital step to ensuring viral suppression in the community.

A major impediment to the goal of zero AIDS-related deaths and of achieving widespread viral suppression among people living with HIV occurs at the beginning of the HIV treatment cascade. Notwithstanding that HIV testing has been significantly scaled up in sub-Saharan Africa in the past decade, according to 15 household surveys conducted between 2007 and 2011 in sub-Saharan Africa, an estimated 36% of people in the region have never been tested for HIV. While the estimated 39% of people in sub-Saharan Africa tested within the last year are likely to know their HIV status, the additional 25% of people who were tested in earlier years may not have knowledge of their current HIV status (see Figure 4.4). In geographic settings and populations with high HIV prevalence and incidence, annual HIV testing is recommended among HIV-negative persons.

FIGURE 4.4

Knowledge of HIV status among men and women living with HIV, selected countries, 2010–2011



Source: Demographic and Health Surveys 2010–11

Due to lack of access to testing, one in four people who initiate antiretroviral therapy in low- and middle-income countries have CD4 counts under 100, reflecting late diagnosis and, therefore, a high risk of HIV-related illness and death.[5]

In all regions, women are more likely to have been tested than men, most likely due to the implementation of the routine offer of HIV testing in antenatal settings. While the number of HIV tests performed in 76 countries submitting relevant data in their Global AIDS Progress Reports rose by nearly 12% in 2012, substantially greater gains in HIV testing uptake will be needed to increase the proportion of people living with HIV who have access to treatment.

Until recently, stand-alone voluntary counselling and testing clinics were the principal testing modality in many countries. In 2004, UNAIDS amplified its testing guidance to support provider-initiated offers of HIV testing and detailed WHO/UNAIDS guidance on provider-initiated testing was issued in 2007. Some country studies suggest that provider-initiated counselling and testing has increased HIV testing coverage.[6] In recent years, door-to-door home-based testing has been demonstrated to increase the reach of HIV testing services in sub-Saharan Africa.[7,8] Using rapid diagnostic tests delivers an initial HIV test result in less than 30 minutes, potentially accelerating an individual's receipt of the information, services and support systems they need. Such tests have provided some promising results in hard-to-reach populations.

Limitations of these approaches have been noted, including the under-use of stand-alone and facility-based voluntary counselling and testing, low rates of client-initiated testing among key populations,[9] high costs and anonymity concerns associated with door-to-door campaigns, and lack of access by men, rural populations and the poor.[10] Recognizing the need to increase knowledge of HIV status and to encourage earlier diagnosis of infection, many countries are using partner/couples testing and other innovative testing approaches.

In addition to their suitability for facility-based and community settings, rapid diagnostic tests may be used by an individual to test themselves in the privacy of their own home. In 2012, an HIV oral fluid rapid diagnostic test was approved by the United States Food and Drug Administration (US FDA) and made available for over-the-counter purchase in the United States. Oral fluid rapid diagnostic tests have been prequalified by WHO since 2004, but they remain relatively expensive. With the anonymity offered by self-testing and the high acceptability found in pilot exercises in both concentrated and generalized epidemic settings, the approach offers potential for rethinking conventional approaches and assumptions about testing. The impact of self-testing on linkage to care is under investigation in a number of studies. Preliminary results from a major cluster-randomized trial in Malawi found that, in the initial follow-up period (four months), HIV treatment uptake in communities with self-testing alone was no better than the control condition, but uptake more than doubled when self-testing was accompanied by assisted home initiation of antiretroviral therapy.

Ensuring that people living with HIV are diagnosed earlier requires scale-up of both clinical and community-based HIV testing. Brazil, Kenya, Malawi, South Africa, Uganda, the United Republic of Tanzania and Zambia have integrated the promotion of HIV testing in community campaigns that provide screening or prevention services for multiple diseases (e.g. distribution of long-lasting insecticide treatment bed nets, safe water filters, diabetes, hepatitis and/or screening for sexually-transmitted

infections). Grass-roots community organizations played a pivotal role in increasing testing uptake in Zimbabwe in the mid-2000s.[11] Project Accept (HPTN 043), a large randomized community trial, found that community engagement, mobile testing and post-test services resulted in higher uptake of testing than standard clinic-based voluntary counselling and testing. A systematic review and meta-analysis of evidence for community-based HIV testing and counselling showed that community-based testing achieved high rates of uptake, reached people living with HIV with high CD4 counts, and linked individuals into care.[12]

Little systematic data exist on the proportion of people living with HIV who are linked to care.[13] Once linked to care there are mixed findings regarding retention in care. According to data from 18 countries, retention in HIV care declines over time, with 12- and 60-month retention rates of 86% and 72%, respectively. There is considerable variation in reported retention rates among countries. Food support has been shown to support HIV treatment success, including adherence and retention in care.[14]

Improving retention through community engagement

Catholic Relief Services, a member organization of Caritas Internationalis, has worked with a consortium of partners to implement AIDSRelief, an HIV care and treatment program that was funded by the US President's Emergency Plan for AIDS Relief (PEPFAR) since 2004. The AIDSRelief programme supported the rapid scale-up of HIV care and treatment services for poor and underserved people in 10 countries across Africa, the Caribbean, and Latin America. The programme worked mainly with faith-based local partners including hospitals, clinics, dispensaries, and local community groups, including people living with HIV.

AIDSRelief developed an approach that enabled strong adherence to treatment, by using family and community engagement, optimal drug selection, use of longitudinal medical records and the provision of qualified medical, laboratory, community and pharmacy support. AIDSRelief understood how to treat each patient for the best individual outcomes and how to scale that model to treat tens of thousands without compromising quality or capping patient enrolment. Catholic Relief Services and its partners deliberately strengthened local capacities and later transitioned the AIDSRelief program to local ownership. By the end of the AIDSRelief programme in February 2013, it had enrolled more than 700 000 patients in care including 395 000 patients on antiretroviral therapy, with 10.6% loss to follow-up, an 85% retention rate, 7.8% mortality rate and 88.2% viral suppression.

Recent cascade analyses in Brazil, China, Malawi and Viet Nam confirm that many individuals are lost at various stages of the HIV treatment continuum, reducing the proportion of people living with HIV who achieve viral suppression and other treatment benefits.[15] Such analyses can help national planners and programme implementers in devising focused interventions to improve programme outcomes. These exercises also provide useful guidance for planning and implementing studies to identify risk factors for non-retention and evaluate interventions to reduce patient loss during the HIV treatment process. Community groups and caregivers can play an important role in treatment adherence. Efforts to monitor results across the HIV treatment cascade should use the total population of people living with HIV, diagnosed and undiagnosed, as the denominator for analysis.

Continuity of care is particularly challenging for people living with HIV who are affected by humanitarian crises. A 2013 mapping exercise conducted by UNHCR concluded that many people receiving antiretroviral therapy in the Central African Republic were forced to flee as a result of conflict, leading to the discontinuation of HIV treatment for thousands as a result of the lack of functional health services in the remote settings to which they migrated.

As an adjunct to the cascade, countries may find it useful to estimate the proportion of the total adult population that has unsuppressed HIV. In countries with very low HIV treatment coverage, this will be roughly the same as adult HIV prevalence. However, as countries scale up HIV treatment, the proportion with an unsuppressed virus load will decline, reflecting a safer population-level environment with fewer opportunities for transmission. As HIV prevalence is projected to increase as people live longer as a result of HIV treatment, the percentage of people with an unsuppressed virus load may become a more useful indicator of the potential for transmission of HIV.

ENHANCING THE DURABILITY AND EFFICIENCY OF HIV TREATMENT

HIV treatment is life-long and, in most cases, should lead to a near-normal life span. Towards this end, optimal durability of treatment regimens is needed to delay the emergence of drug resistance, which reflects treatment failure and signals the need to switch regimens. Earlier assessments had suggested that 6% of all individuals receiving first-line therapy in sub-Saharan Africa needed to switch to second-line regimens in any given year. Despite the shortfalls seen in the HIV treatment cascade, strong results are achievable. Recently, Rwanda reported that 86% of people starting antiretroviral therapy were virally suppressed 18 months later, while Senegal reported that 80% of people receiving antiretroviral therapy had viral suppression after five years.[16]

With the aim of increasing HIV treatment durability, simplifying procurement, saving costs, minimizing side effects and enhancing treatment adherence, the 2013 WHO antiretroviral guidelines recommend that eligible patients receive a simplified, daily, single-pill regimen where possible. WHO recommends that patients currently receiving more complicated regimens be switched to the simpler regimen and that particular efforts focus on transitioning patients off regimens that contain d4T (stavudine), which has been associated with sometimes-severe side effects. In 2012, Viet Nam's use of daily, single-pill regimens was associated with increases in HIV treatment adherence.

Using optimized, more durable regimens is an important component of the Treatment 2.0 approach, which aims to catalyse a new phase of HIV treatment and care. According to mid-term reports, countries in Latin America, Asia and the Pacific, Eastern Europe and Central Asia are using Treatment 2.0 as a tool to aid them in defining and implementing locally relevant HIV treatment policies and programmes. Some aspects of Treatment 2.0, such as laboratory simplification, remain works in progress; CD4 technologies that may be used at the point of care are being rolled out in some settings, such as Jamaica, but additional work is needed to build sufficient capacity for the monitoring of antiretroviral treatment, using tests of viral loads. Consistent with the Treatment 2.0 goal of leveraging community engagement to increase HIV treatment uptake, Argentina has strengthened linkages between treatment centres and community groups to support treatment adherence.

Treatment 2015: Speed, Focus, Innovation

Treatment 2015 aims to catalyze faster progress towards universal access to HIV treatment. New ways of thinking and operating will be needed. Treatment 2015 builds on previous work to expand access to HIV treatment including the earlier 3x5 effort, the PEPFAR Blueprint: creating an AIDS-free generation, the Treatment 2.0 initiative and the Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. Treatment 2015 emphasizes three critical elements of success:

Speed. Rapid scale-up enables responses to modify the epidemic itself, with prevalence increasing as more people live longer and healthier lives, and with the potential to reduce new HIV infections in communities. In numerous countries and areas, rapid HIV treatment scale-up has led to sharp reductions in AIDS-related deaths while high coverage of treatment is associated with lower rates of new HIV infections.

Focus. As those currently receiving HIV treatment may be the easiest the reach, further progress towards universal access will demand intensified action to bring HIV testing and treatment services to those who currently lack it. Treatment 2015 calls for all countries to immediately use available data to identify key geographic settings and populations with high HIV prevalence and disproportionate unmet need for HIV treatment. Globally, Treatment 2015 urges particularly intensive focus on 30 countries where 90% of the people with an unmet need for HIV treatment are living.

Innovation. New approaches are needed to more swiftly translate scientific advances into concrete action in countries. Innovation should be unleashed to re-conceptualize HIV testing, link individuals to comprehensive treatment and care at an early stage of infection and strengthen community systems.

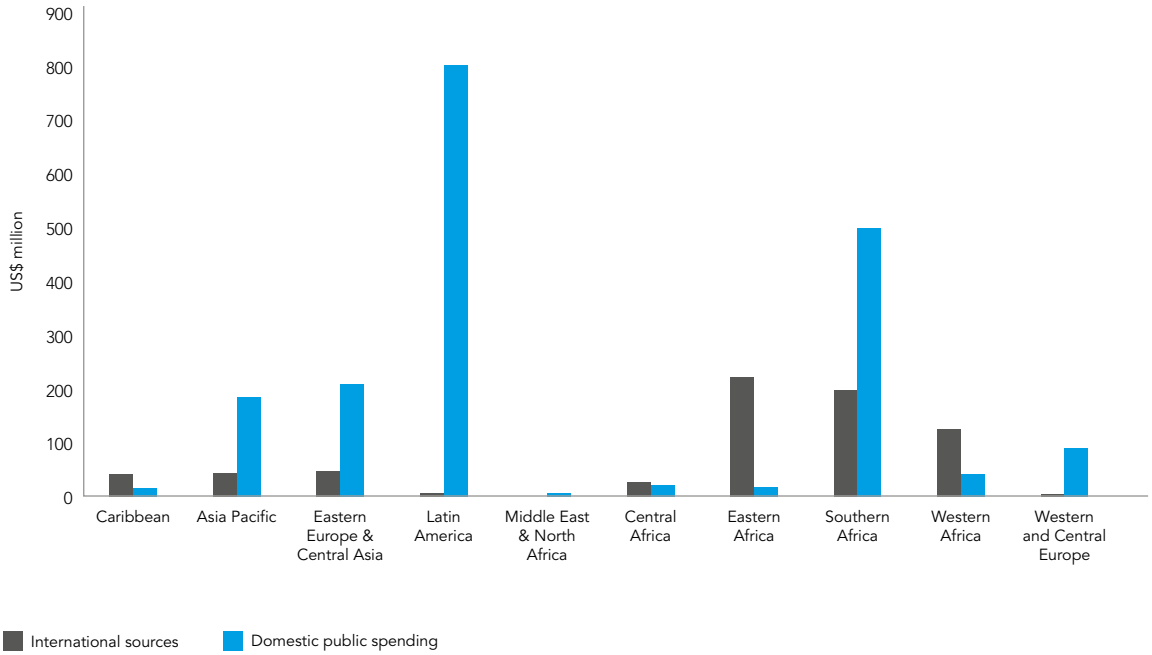
FUNDING OF ANTIRETROVIRAL THERAPY

In 2012, an estimated US$ 9.9 billion was available for HIV treatment and care in low- and middle-income countries. In most regions, domestic expenditure represents the single largest source of funding for HIV treatment programmes. However, many countries, notably those in East, Central and West Africa, remain heavily dependent on international financing for their antiretroviral treatment programmes (see Figure 4.5). Several countries are exploring innovative strategies to diversify funding sources and generate renewable sources of funding for HIV programmes, an issue addressed in greater detail in Section 6.

Although the cost of antiretroviral medicines has declined, further reductions will be needed to expedite uptake and ensure the sustainability of HIV treatment programmes. One strategy to reduce dependence on international funding for HIV treatment is to build robust capacity in low- and middle-income countries to import and also manufacture essential medicines. The African Union's *Roadmap on Shared Responsibility and Global Solidarity for the AIDS, Tuberculosis and Malaria Response in Africa* calls for investment in the establishment of regional pharmaceutical manufacturing hubs, stepped-up efforts to ensure that knowledge and technology are transferred to the region, harmonization of regulatory systems and maximum use of flexibilities permitted under the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement.

FIGURE 4.5

International and domestic public spending on antiretroviral therapy in low- and middle-income countries, by region, various years up to 2013



Source: GARPR 2013.

Although several countries have effectively used available flexibilities to enhance the affordability of essential HIV medicines, TRIPS flexibilities remain under-utilized as a strategy to further lower antiretroviral drug prices. While mid-term country reviews acknowledged the impact of intellectual property rights on access to medicines, only a very few countries from the Asia Pacific and Latin America regions mentioned concrete actions to use existing TRIPS flexibilities. Some countries cited concerns regarding the potential impact of bilateral and multinational free trade agreements on the future availability of affordable medicines, although country reports also cited lack of knowledge and expertise as barriers to the development of favourable legislative environments to minimise intellectual property barriers to accessing essential medicines.

LOOKING AHEAD

All 109 countries that reported results of their mid-term review as of August 2013 identified HIV treatment as a priority in the national strategic plan. Of these 109 countries, 15 report that they are not on track to achieve their HIV treatment targets by 2015. Globally, although the 2015 target of reaching 15 million people with antiretroviral treatment is within reach, the pace of scale-up will need to accelerate if the world is to attain this goal. If all low- and middle-income countries adopt the 2013 WHO guidelines the estimated number of people in need of antiretroviral therapy will increase to 30.7 million in 2015.

National mid-term reviews noted several challenges to accelerated HIV treatment scale-up, including difficulties in motivating people to learn their HIV status, the deterrent effects of stigma and discrimination, frequent stock-outs of antiretroviral medicines, and the lack of laboratory capacity for CD4, viral load and drug resistance monitoring. As an overarching concern, countries expressed anxiety regarding the sustainability of HIV treatment programmes, citing the need for further reductions in antiretroviral drug prices (including but not limited to second- and third-line regimens) and sustainable financing. A number of countries from Latin America, Asia and the Pacific, and West and Central Africa have expressed concerns regarding the financial implication of implementing the 2013 WHO HIV treatment guidelines, which substantially increase the number of people eligible for HIV treatment.

With the aim of reaching the 2015 HIV treatment target, mid-term reviews identified several key strategies for moving forward. Reports emphasized the critical importance of strong and sustained political commitment to ensure the investments that will be needed to continue scaling up. Efforts must intensify to involve civil society in demand creation, service delivery, treatment literacy programming and development of early warning systems for antiretroviral stock-outs. Countries called for regional and global initiatives to address bottlenecks in the pharmaceutical market, including regulatory aspects such as drug quality control, management of intellectual property rights, optimal drug pricing and local production of antiretroviral drugs. Numerous country reports also emphasized the need for further integration of the HIV response in the health and other sectors.

The *Treatment 2015* framework provides a clear way forward to expedite progress in scaling up HIV treatment. Using the 2015 target as a key milestone for scaling up, *Treatment 2015* provides a framework for accelerated scale-up towards universal HIV treatment access. To generate robust demand for HIV treatment, countries should re-conceptualize HIV testing by adopting multiple, proactive strategies to encourage knowledge of HIV status; invest in community literacy initiatives; remove deterrents to HIV treatment access; and emphasize the preventative, as well as therapeutic, benefits of HIV treatment. To ensure that we invest in accelerating scale-up, domestic and international contributions should increase, continued strides should be made in improving the efficiency of HIV treatment programmes, health and community systems should be strengthened, programmatic innovation to spur swifter scale-up should be encouraged, and the means to manufacture antiretroviral medicines in Africa should be created. Finally, steps are needed to effectively deliver services through implementation of efficient, innovative delivery models; take steps to ensure equitable access; promote accountability through rigorous measurement of outcomes; and forge strategic HIV treatment partnerships that leverage the unique experience and expertise of diverse stakeholders.

Treatment 2015 calls for enhanced focus to accelerate scale-up.[17] Although the framework is applicable in all countries and regions, it calls for intensified efforts in 30 countries where 9 out of 10 people who have an unmet need for HIV treatment live: Angola, Brazil, China, Cameroon, Central African Republic, Chad, Colombia, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, India, Indonesia, Kenya, Lesotho, Malawi, Mozambique, Myanmar, Nigeria, Russian Federation, South Africa, South Sudan, Thailand, Togo, Uganda, Ukraine, United Republic of Tanzania, Viet Nam, Zambia and Zimbabwe.

Just as HIV treatment is contingent upon the scale-up of HIV diagnosis, by the same token the simplification, improvement, availability, new standard eligibility criteria and scaled up access to HIV treatment have profound impacts on HIV testing and the meaning and implications of learning one's status. Empowering people to know their status requires simplification in testing technologies and in the way that people can access testing services.

LEADERSHIP AND INNOVATION FOR HIV TREATMENT SCALE-UP

Throughout the world, countries have taken bold steps to deliver HIV treatment services to those who need them. For example, Viet Nam is rapidly scaling up, with new patients accounting for 23% of the 72 711 individuals receiving antiretroviral therapy in 2012. Viet Nam has expanded antiretroviral therapy in closed settings (such as education centres and prisons), and achieved a retention rate exceeding 80%. It has also implemented projects in two districts for early initiation of antiretroviral therapy.

Several countries have worked to extend human resources for health. For example, Malawi has been a pioneer in nurses' administration of antiretroviral therapy and integration of community health workers in various HIV services, including administration of HIV treatment for specialized community health workers.

Innovative efforts are helping improve the quality of HIV treatment services. Mozambique, for example, is at the forefront with regard to the use of new diagnostic tools, such as point-of-care devices that are already being used for CD4 readings and are currently being studied for viral load monitoring. Use of mobile technology in Mozambique is helping improve patient retention, provide adherence support and enhance information management.

Argentina has established early warning systems to monitor viral resistance and foster HIV treatment adherence. Interdisciplinary teams in hospitals and health centres collaborate with civil society organizations in an effort to improve treatment efficiency.

South Africa is enhancing the long-term sustainability of its HIV treatment programme. In 2012, a nearly US$ 700 million tender for fixed-dose antiretroviral regimens led to price reductions of 38% for one fixed-dose combination (tenofovir, emtricitabine and efaverinz), yielding savings estimated at US$ 260 million in 2013–2014.

Ensuring universal access to antiretroviral treatment in middle-income countries

Although efforts to expand access to antiretroviral therapy have primarily focused on low-income countries, ensuring universal HIV treatment access in middle-income countries remains a major challenge. In June 2013, delegates from more than 20 middle-income countries, from all regions, joined civil society representatives and international organizations in Brazil to explore strategies to expand HIV treatment access in middle-income countries. Success in middle-income countries will play a critical role in the push for universal access, as it is projected that a majority of people living with HIV will be living in such countries by 2020.

Middle-income countries, increasingly viewed as potentially lucrative pharmaceutical markets, often do not benefit from international drug access initiatives. Many middle-income countries pay high prices for antiretroviral medicines. Although this is especially true for drugs used in second- and third-line regimens, even certain WHO-recommended first-line, fixed-dose combinations are unaffordable for some middle-income countries. Currently, antiretroviral treatment in middle-income countries is financed through a combination of domestic budget allocations and out-of-pocket spending. As demand grows for HIV treatment, in part due to expanded eligibility under the 2013 WHO consolidated antiretroviral guidelines, future access to affordable HIV treatment options is potentially jeopardized.

The Brasilia meeting included considerable discussion and analysis regarding markets and pricing for HIV medicines, their regulatory status in different countries and strategies that are being implemented to ensure a public health-oriented management of intellectual property rights. The importance of information-sharing and technical support between middle-income countries was emphasized, with a particular focus on establishing or improving platforms for the exchange of information regarding prices and patents. Participants developed recommendations for how countries and multilateral agencies might collaborate to overcome bottlenecks pertaining to pricing mechanisms, regulatory issues, intellectual property management and community mobilization:[18]

- Mapping on pricing mechanisms
- Information exchange platforms on pricing and patents
- Support civil society on intellectual property (IP) related advocacy
- Improve transparency of licence agreements
- Strengthen collaboration between WHO and national drug regulatory agencies on quality control under the WHO pre-qualification programme
- Campaigning on the quality of generics.

5. HALVE TUBERCULOSIS DEATHS AMONG PEOPLE LIVING WITH HIV BY 2015

Tuberculosis remains the leading cause of death among people living with HIV. In 2012, people living with HIV accounted for 1.1 million (13%) of the estimated 8.7 million people globally who developed tuberculosis. Of the 2.8 million people with tuberculosis who received an HIV test result in 2012, 20% tested HIV-positive, including 42% of people with tuberculosis in sub-Saharan Africa. More than 75% of the estimated HIV-positive incident tuberculosis cases live in just 10 countries (Ethiopia, India, Kenya, Mozambique, Nigeria, South Africa, United Republic of Tanzania, Uganda, Zambia and Zimbabwe).

As a result of sustained progress in meeting the needs of tuberculosis patients living with HIV, the world is within reach of achieving the 2015 target of reducing by 50% tuberculosis-related deaths among people living with HIV. However, progress in reducing deaths is levelling off; hence countries need to continue stepping up their efforts.

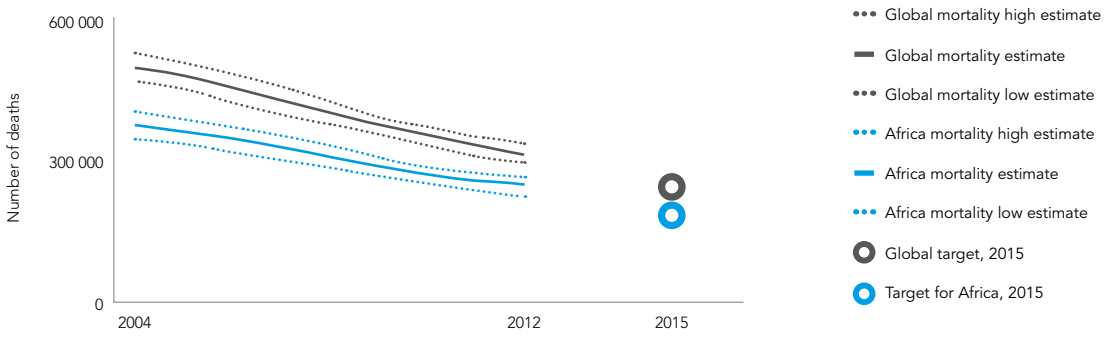
There is an urgent need to implement proven prevention and treatment strategies for the linked epidemics of HIV and tuberculosis. If gains are to be accelerated, scaled-up antiretroviral therapy is critical. While focused efforts to deliver antiretroviral therapy to all HIV-positive people with TB are vital, broader scale-up of HIV treatment would also contribute to the global goal by reducing the number of people who develop active tuberculosis. To further buttress prevention efforts, the *Three Is of HIV/TB – Intensified* case finding, *Isoniazid* preventive therapy and *Infection* control in clinical settings – must be effectively implemented.

PROGRESS IN REDUCING TUBERCULOSIS-RELATED DEATHS

The global target calls to halve the number of tuberculosis-related deaths among people living with HIV to less than 250 000 in 2015. The world has made substantial gains towards this goal (see Figure 5.1). Since 2004, tuberculosis-related deaths among people living with HIV have declined by 36% worldwide, and slightly less in Africa, home to 75% of all people living with tuberculosis and HIV. The World Health Organization (WHO) estimates that the scale-up of collaborative HIV/tuberculosis activities (including HIV testing, antiretroviral therapy and the *Three Is*) prevented some 1.3 million people from dying during 2005 to 2012.

Among the 41 countries with high HIV/TB burden, 17 have been estimated to have reduced tuberculosis-related deaths among people living with HIV by over 50%, nine countries have reduced deaths by 25–50%. However, in some of the countries, mortality has decreased less, or even risen.

FIGURE 5.1
Estimated number of tuberculosis-related deaths among people living with HIV, globally and for Africa, 2004–2012



Source: Global tuberculosis report 2013. Geneva, World Health Organization, 2013 (detailed country estimates are in the WHO report).

TABLE 5.1
Estimated change in tuberculosis-related deaths among people living with HIV in 41 tuberculosis/HIV high-burden countries, 2004–2012

>50% reduction	25%–50% reduction	<25% reduction
Botswana	Cameroon	Angola
Burkina Faso	Chad	Brazil
Burundi	China	Congo
Cambodia	Djibouti	Dem. Rep. Congo
Central African Republic	India	Indonesia
Côte d'Ivoire	Kenya	Lesotho
Ethiopia	Mali	Mozambique
Ghana	United Republic of Tanzania	Russian Federation
Haiti	Zambia	Sierra Leone
Malawi		South Africa
Myanmar		Sudan
Namibia		Swaziland
Nigeria		Togo
Rwanda		Ukraine
Thailand		Viet Nam
Uganda		
Zimbabwe		

SCALING UP ANTIRETROVIRAL THERAPY TO PREVENT TUBERCULOSIS-RELATED DEATHS AMONG PEOPLE LIVING WITH HIV

Antiretroviral therapy reduces by 65% the risk that a person living with HIV will develop tuberculosis,[1] and HIV treatment lowers the risk of death among people living with HIV who have tuberculosis by about 50%. Among individuals co-infected with HIV and latent tuberculosis, antiretroviral therapy repairs immune systems damaged by HIV, preventing the development of active tuberculosis. Where latent infection has progressed to active tuberculosis, antiretroviral therapy boosts the body's capacity to respond to

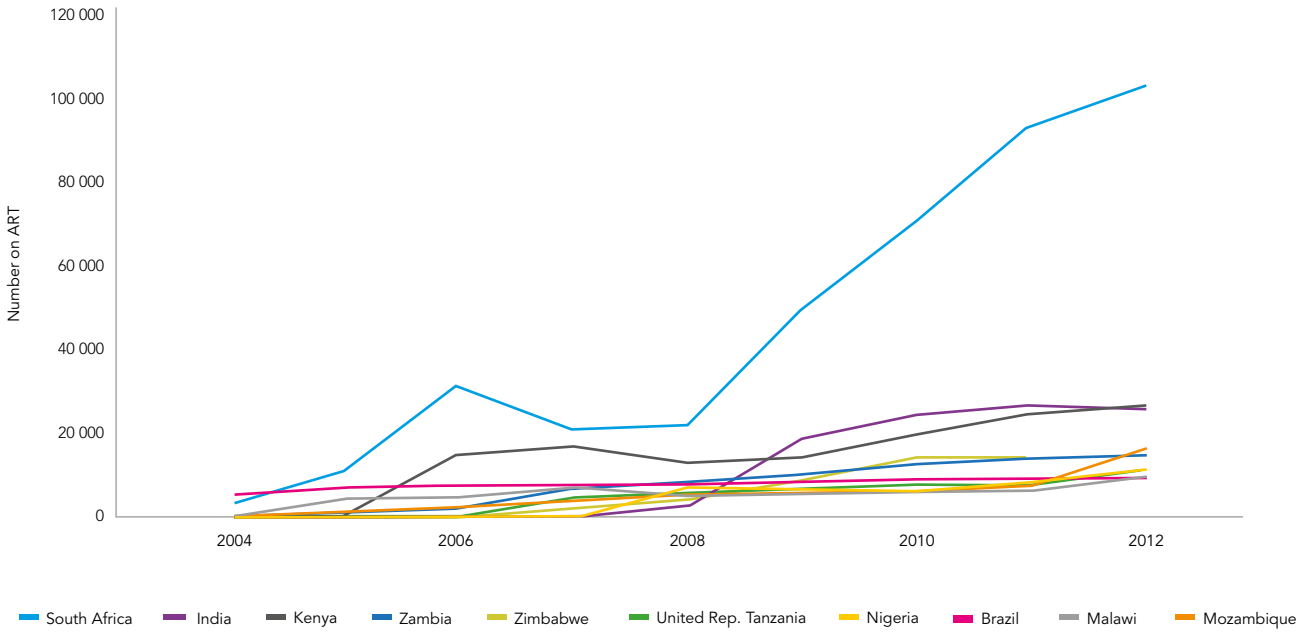
the disease. Acknowledging the central role of antiretroviral therapy in preventing tuberculosis-related deaths among people living with HIV, WHO's policy on collaborative HIV/tuberculosis activities together with the 2013 antiretroviral guidelines recommends immediate initiation of HIV treatment for all people living with HIV who develop tuberculosis, regardless of CD4 count.

Among the 10 countries with the largest number of tuberculosis cases living with HIV receiving antiretroviral therapy, South Africa has experienced the most noteworthy success in scaling up antiretroviral therapy, with more than 100 000 individuals with HIV and tuberculosis receiving HIV treatment in 2012. The percentage of those estimated to have HIV-associated tuberculosis who received antiretroviral therapy in 2012 was 59% in Kenya, 57% in Malawi, 41% in Zambia and 34% in the United Republic of Tanzania. Among those countries, the greatest gains in increasing the number of people in antiretroviral therapy in 2012 were made in Mozambique (a 101% increase), Malawi (a 48% increase), the United Republic of Tanzania (a 43% increase), and Nigeria (a 29% increase) (see Figure 5.2).

Despite these gains, coverage continues to lag in the countries with the greatest HIV/tuberculosis burdens. Among the 10 reporting countries with the largest number of HIV/tuberculosis cases on antiretroviral therapy, only Kenya and Malawi were delivering antiretroviral therapy in 2012 to more than 50% of estimated incident HIV positive tuberculosis cases. In general, the pace of antiretroviral treatment scale-up for people living with both HIV and tuberculosis is levelling in the top 10 HIV/tuberculosis high-burden countries.

FIGURE 5.2

Number of HIV positive tuberculosis patients on antiretroviral therapy, as reported by ten countries, 2004–2012



Source: GARPR reporting 2013, UNAIDS; Global tuberculosis report 2013. Geneva, World Health Organization, 2013

Globally, antiretroviral treatment coverage for people living with both HIV and tuberculosis remains inadequate (see Table 5.2). Whereas antiretroviral treatment reached 65% of all treatment-eligible people living with HIV in 2012, only 57% of people diagnosed with HIV and tuberculosis co-infection received antiretroviral therapy. Among 41 priority countries for collaborative HIV/tuberculosis activities, only four (Brazil, Kenya, Malawi and Ukraine) reached at least 50% treatment coverage among estimated incident HIV and tuberculosis cases, with extremely low coverage reported in Congo, and Sudan, where less than 5% of estimated HIV-positive incident tuberculosis cases received HIV treatment in 2012. Especially in areas with a high prevalence of multi-drug resistant tuberculosis, the costs of essential drugs can be high, underscoring the importance of generic alternatives to ensure the affordability of HIV/tuberculosis efforts.

HIV TESTING: A CRITICAL BOTTLENECK

Prompt diagnosis of HIV infection among tuberculosis patients is required for effective HIV treatment. The number of people living with HIV who are diagnosed with tuberculosis is increasing each year, but implementation of routine HIV testing and counselling in tuberculosis care settings remains inadequate, slowing further progress in reaching HIV-positive tuberculosis cases with essential HIV treatment.

The proportion of people with tuberculosis who received HIV testing in 2012 increased by 14% in comparison to 2011, to 2.8 million. Greatest progress has been reported in sub-Saharan Africa, where 75% of notified tuberculosis cases were tested for HIV in 2012 (see Table 5.3).

TABLE 5.2
Percentage of HIV-positive new tuberculosis patients receiving antiretroviral therapy

>50%		50–25%		<25%	
Ukraine	92	Botswana	49	Viet Nam	24
Kenya	59	Rwanda	48	Sierra Leone	24
Malawi	57	China	47	Nigeria	24
Brazil	57	Cambodia	47	Burundi	24
		Namibia	46	Myanmar	22
		Lesotho	42	Cameroon	22
		Zambia	41	Angola	21
		Togo	40	India	20
		Ghana	37	Mozambique	19
		Mali	35	Djibouti	15
		Ethiopia	35	Chad	15
		United Rep. Tanzania	34	Dem. Rep. Congo	14
		Burkina Faso	31	Congo	4
		South Africa	31	Sudan	1
		Côte d'Ivoire	30		
		Thailand	30		
		Haiti	29		
		Swaziland	29		
		Uganda	28		

Source: GARPR reporting 2013, UNAIDS; Global tuberculosis report 2013. Geneva, World Health Organization, 2013

Note: Indonesia tuberculosis and AIDS programme numbers had discrepancies, hence one coverage number could not be included.

TABLE 5.3

HIV testing, treatment for HIV-positive tuberculosis patients and prevention of tuberculosis among people living with HIV, UNAIDS regions, 2012*

	ESTIMATED HIV-POSTIVE INCIDENT TUBERCULOSIS CASES			NUMBER OF TUBERCULOSIS PATIENTS WITH KNOWN HIV STATUS	PERCENTAGE OF NOTIFIED TUBERCULOSIS PATIENTS TESTED FOR HIV	PERCENTAGE OF TESTED TUBERCULOSIS PATIENTS HIV-POSITIVE	PERCENTAGE OF IDENTIFIED HIV-POSITIVE TUBERCULOSIS PATIENTS STARTED/ CONTINUED ON ANTIRETROVIRAL THERAPY	NUMBER OF HIV- POSITIVE PEOPLE SCREENED FOR TUBERCULOSIS
	BEST	LOW	HIGH					
Caribbean	5	4.2	5.8	17.4	77	20	47	3.97
East Asia	7.8	6.9	8.7	317	31	1.9	59	295
Eastern Europe and Central Asia	16	14	18	175	65	6.7	74	23.3
Latin America	25	22	28	103	52	16	83	0.52
Middle East and North Africa	7	6.2	7.8	36.2	26	4	56	12.8
North America	1.2	1.1	1.3	8.93	79	7.6	...	...
Oceania	1.1	0.73	1.5	5.38	21	7.1	89	2.86
South and South-East Asia	190	170	200	1050	36	6.1	60	1360
Sub-Saharan Africa	830	760	900	1050	75	43	55	2390
Western and Central Europe	2.7	2.6	2.9	28.8	43	4.1	78	0.22
Global	1100	1000	1200	2790	46	20	57	4090

* Figures are in thousands, except where indicated as percentages.

However, global coverage of HIV testing remains insufficient, with just 46% of notified tuberculosis cases being tested for HIV in 2012. In East Asia, South and South-East Asia, home to one in six tuberculosis cases living with HIV globally, HIV testing coverage for people living with HIV is especially low (31% and 36%, respectively, in 2012).

EFFECTIVE TB PREVENTION FOR PEOPLE LIVING WITH HIV

The *Three Is* have yet to be fully implemented, contributing to the persistence of tuberculosis as the leading cause of death for people living with HIV. In 2012, 42 countries reporting data provided isoniazid preventive therapy to nearly 520 000 people living with HIV. Although the trend towards increased uptake of preventive therapy is encouraging, the number currently receiving isoniazid preventive therapy is believed to represent a fraction of the number of people living with HIV who could benefit from the intervention. Among 30 countries reporting both denominator and numerator for preventive therapy, 30% of those newly registered in care received isoniazid preventive therapy.

HIV service settings are increasingly integrating tuberculosis screening. From 2010 to 2012, the number of people in HIV care who were screened for tuberculosis rose by more than 70%, from 2.4 million to 4.1 million.

MEASURING KEY HIV/TB INDICATORS

Available data, summarized in country GARPR reports, provide a general understanding of the current situation regarding the interaction between HIV and tuberculosis, as well as some indication of trends for HIV-positive people with tuberculosis. However, available information also involves important uncertainties regarding data inputs and the reliability of extrapolations used to compensate for missing data elements in order to estimate tuberculosis incidence, prevalence, mortality, HIV-associated tuberculosis and multi-drug-resistant tuberculosis. The percentage of people living with HIV who die of tuberculosis remains unclear, with autopsy findings suggesting a proportion that is higher than that generated by case reports. Due to diagnostic challenges, information on tuberculosis among children living with HIV remains scarce. Implementation of the *Three Is* is inadequately monitored, and there is little information available on people living with HIV among the 500 000 estimated cases of extreme multi-drug-resistant tuberculosis. Data provided by countries regarding key indicators such as HIV or tuberculosis screening, antiretroviral therapy for people living with HIV and tuberculosis, and receipt of preventive services, is of unequal quality, reflecting underreporting, missing reports, misclassifications or duplication of entries that result in over-reporting.[2]

Efforts are needed to improve the completeness and accuracy of strategic HIV/TB data. As an example of the practical challenges that monitoring and evaluation efforts confront, HIV and tuberculosis programmes in many countries interpret treatment indicators differently, resulting in substantial data discrepancies. Greater integration and coherence between tuberculosis and HIV data collection systems could help improve data quality while simultaneously facilitating enhanced linkages between tuberculosis and HIV services for people living with HIV and tuberculosis.

LOOKING FORWARD

Nearly all countries that reported results from mid-term reviews (103 of 109) identified the reduction of tuberculosis deaths as a national priority. One hundred and one countries indicate that the target has been integrated in national strategic plans.

Although the world appears to be on track to achieve the 2015 target for reducing tuberculosis deaths among people living with HIV, progress is not uniform, with 26 countries reporting that they are not making adequate progress to reach the 2015 target. Moreover, the 2015 milestone represents but an interim step towards the ultimate goal of controlling and eventually eliminating tuberculosis. The continuing high level of morbidity and mortality associated with tuberculosis among people living with HIV can and must be stopped. tuberculosis is entirely preventable, including for people living with HIV, and no one should die from a disease that is both preventable and curable.

Of all available tools, antiretroviral therapy is the single most powerful for HIV-associated tuberculosis – reducing the risk of death by between 54% and 95%.[3] Improving access to early HIV diagnosis and antiretroviral therapy for those who test HIV-positive is essential to reducing tuberculosis deaths among people living with HIV. In this regard, it is cause for concern than no national mid-term review report discussed early antiretroviral therapy as a strategy to reduce tuberculosis-related mortality among people living with HIV.

All available tools need to be mobilized. These include effective prevention measures, including enhanced screening and diagnosis, isoniazid preventive therapy (life-long where indicated) and proper infection control. Contacts of adults with tuberculosis should receive isoniazid preventive therapy, and occupational health programmes for health care workers are urgently needed to ensure delivery of prevention interventions to workers who have been exposed to tuberculosis.

Full and rapid implementation of the 2013 WHO antiretroviral guidelines and of earlier guidance on collaborative HIV/TB activities is essential. This will demand immediate steps to strengthen collaborative HIV/TB activities and to implement policies and protocols that regularize the delivery of antiretroviral therapy for all HIV-positive people with tuberculosis, regardless of CD4 count.

Focused efforts are needed to address the impediments to an effective response to HIV-associated tuberculosis identified by national mid-term reviews. These include poor uptake of prevention and treatment interventions, lack of clear policy guidance on immediate initiation of antiretroviral therapy for people living with HIV who have tuberculosis, lack of HIV testing in many tuberculosis clinics and lack of proper infection control.

Innovation is urgently needed to enhance the reach, timeliness and effectiveness of tuberculosis screening and treatment programmes for people living with HIV. Programme planners and implementers should be encouraged to adopt innovative testing and delivery strategies, and communities need to be engaged as partners in the effort to reduce tuberculosis deaths among people living with HIV. The ZAMSTAR study in Zambia and South Africa in 2010 showed that an integrated household approach to tuberculosis and HIV led to a reduction of the overall burden of tuberculosis in the community and a reduction in ongoing community transmission.[4] New technologies should be developed and rapidly implemented. GeneXpert MTB/Rif, an automated molecular diagnostic test that more rapidly diagnoses tuberculosis and drug-resistant tuberculosis and is now being rolled out in many countries, represents the result of new thinking and offers an example of the potentially transformative impact of new health tools.

Leadership and innovation in HIV and tuberculosis in South Africa

South Africa's HIV and tuberculosis epidemics are inextricably linked, with 330 000 of the country's estimated 520 000 new tuberculosis cases in 2011 also living with HIV. Tuberculosis remains the leading cause of death for people living with HIV in South Africa, with 87 000 [76 000 – 100 000] tuberculosis deaths occurring in 2011. The country's tuberculosis challenge is compounded by the high caseload of multi-drug-resistant tuberculosis (MDR-TB) and extensively drug resistant tuberculosis (XDR-TB); in 2011, an estimated 8 100 cases of MDRTB occurred in South Africa among notified pulmonary tuberculosis cases, with only 5 643 (70%) being enrolled on treatment. Among MDR-TB patients started on treatment in 2009, 42% had a successful outcome and 18% died, with poorer outcomes in XDR-TB.

In response to this health challenge, South Africa has taken a number of important public health actions to prevent tuberculosis among people living with HIV. In particular, the country has prioritized an integrated approach to HIV and tuberculosis; strategies for the two diseases are integrated and programme administration is closely linked.

South Africa's response to the linked epidemics of HIV and tuberculosis has been strengthened by a major expansion of HIV testing and treatment services. Following the launch of a major national testing campaign, the number of people receiving antiretroviral treatment in South Africa reached more than 2.15 million in 2012, representing 83% coverage under the 2010 WHO HIV treatment guidelines and a 27% increase over 2011. Antiretroviral therapy is offered to people diagnosed with both HIV and tuberculosis, with 101 937 (or 31% of estimated HIV-positive incident tuberculosis cases) receiving HIV treatment in 2012.

South Africa has also implemented tuberculosis screening for people living with HIV. To address challenges in diagnosing tuberculosis in people living with HIV, the country developed and initiated a national plan for phased implementation of the Xpert MTB/RIF assay as a replacement for microscopy as the initial diagnostic method. Using existing microscopy centres, South Africa introduced more than 290 GeneXpert machines in more than 140 centres, performing nearly 1.2 million tests in nine provinces as of March 2013, with plans in place for further expansion in additional centres. When compared with smear microscopy, GeneXpert doubled the number of laboratory-confirmed tuberculosis cases and detected 7% rifampin resistance, enabling clinicians to tailor regimens to the needs of individual patients.[5]

Enhanced screening has also enabled South Africa to scale up isoniazid preventive therapy. With some 370 000 people living with HIV receiving isoniazid preventive therapy in 2012, South Africa is now the largest provider of the prophylactic regimen in the world.

6. CLOSE THE GLOBAL AIDS RESOURCE GAP

Financial resources for the AIDS response reached their highest level ever in 2012, with increased contributions from both domestic sources and international donors. With funding increases in both 2011 and 2012, the world now has a meaningful chance to achieve the 2015 target of mobilizing annual funding of US$ 22–24 billion for HIV activities in low- and middle-income countries. However, to achieve the 2015 resource target, substantial additional funding will be needed.

Although genuine progress has been made in mobilizing resources for the response, an increase in new infections in many countries and regions and projected flattening in international HIV assistance in the coming years suggest that innovative funding mechanisms and new domestic resources will be required to ensure continued scale-up of life-saving services. International donors also need to renew their commitments to the HIV response in accordance with principles of shared responsibility and global solidarity.

HIV FUNDING GROWS, BUT MORE IS NEEDED

In 2012, an estimated US$ 18.9 (16.6–21.2) billion was available for HIV programmes in low- and middle-income countries (see Figure 6.1). This represents a 10% increase on the US$ 17.1 (15.7-18.5) billion estimated to have been spent in 2011, according to updated estimates, meaning that considerable further investment is needed to reach the 2015 target.

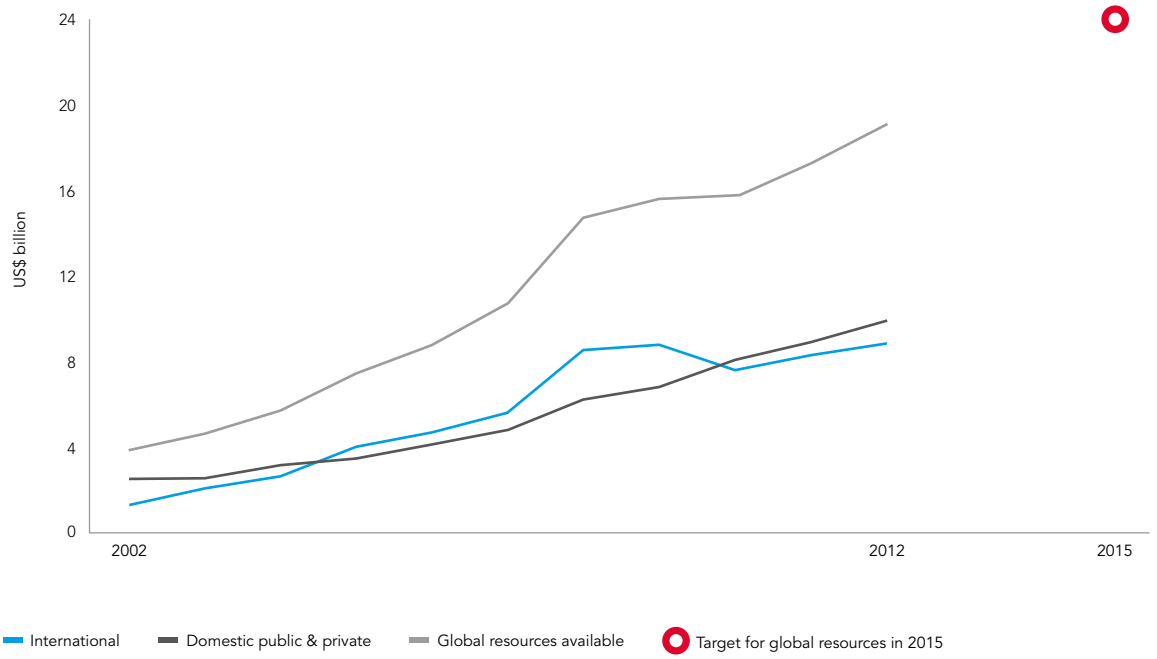
For the second consecutive year, domestic sources accounted for the majority of HIV funding, at an estimated US$ 9.9 (7.7–12.2) billion, corresponding to 53% of all global resources available in 2012.* International spending on HIV programmes also rose slightly in 2012, bringing it back to the level of the funding peak achieved in 2009 when the global financial and economic downturn began.

Including all sources, Eastern and Southern Africa accounted for 47% of all HIV spending in 2012, followed by Latin America (17%). Every other region made up less than 10% of global HIV spending.

Although the 2015 target is within reach, the 2013 World Health Organization (WHO) antiretroviral guidelines modestly increase the total resource needs for the HIV response. It is estimated that full implementation of the new guidelines, which increase the number of people eligible for antiretroviral therapy and also encourage the use of standardized first-line regimens, will require a 5–10% increase in total HIV funding until 2025.

* On HIV spending, reported data for any year ever reported are available for 136 of 141 low- and middle-income countries, with 43 countries having reported data for 2012. Trends in domestic public HIV funding are derived from modelling based on the data submitted through the Global AIDS Response Progress Reporting mechanism. Domestic private expenditure is estimated separately.

FIGURE 6.1
Resources available for HIV in low- and middle-income countries, 2002–2012 and 2015 target*



Source: UNAIDS estimates.

* The UN General Assembly 2011 Political Declaration on HIV and AIDS set a target of US$ 22bn – 24bn by 2015.

COUNTRY LEADERSHIP IN RESOURCE MOBILIZATION

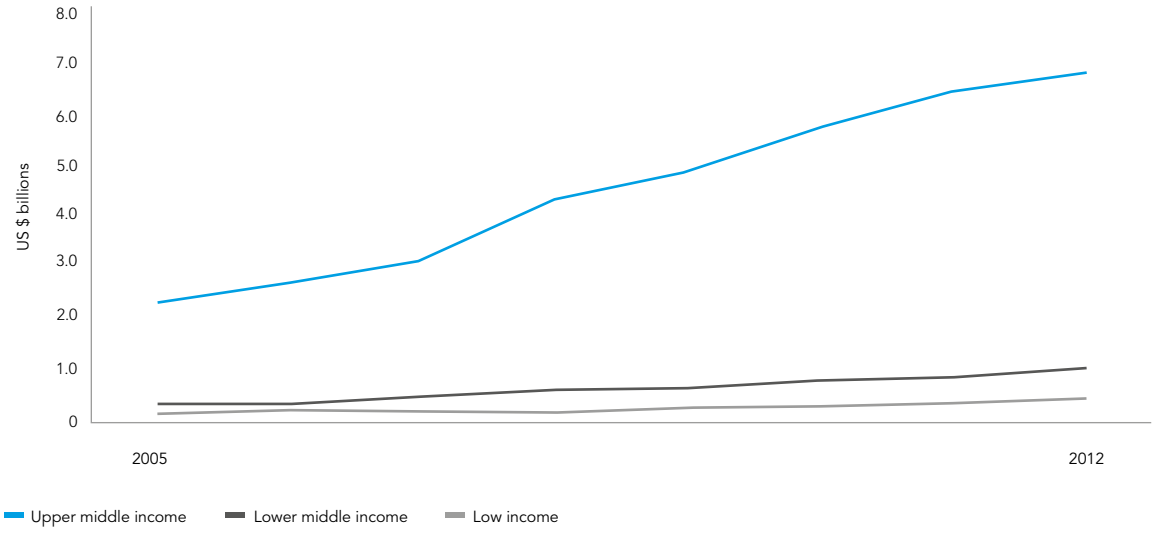
Low- and middle-income countries are developing and leading efforts to mobilize resources for the HIV response. Among countries that undertook mid-term reviews, 90% cited resource mobilization as a national priority. More than 90% of national strategic plans address resource mobilization. In sub-Saharan Africa, numerous countries – including Kenya, South Africa, Togo and Zambia – have sharply increased domestic HIV spending in recent years.[1]

Based on total amount of funding, the upward trend in domestic HIV funding is especially visible among upper-middle-income countries, which generally finance a larger proportion of health services through domestic resources (see Figure 6.2). Proportionally, however, the estimated increase in 2012 was greatest for low-income countries (29%), followed by lower-middle-income countries (26%) and upper-middle-income countries (6%).

Among the 43 low- and middle-income countries reporting AIDS spending data in 2012, more than two-thirds reported an increase in domestic HIV spending. In several countries – Chad, Guinea, Kyrgyzstan and Sierra Leone – domestic funding for HIV activities more than doubled.

FIGURE 6.2

Domestic public funding for HIV in low- and middle-income countries, by income category, 2005–2012



Source: UNAIDS estimates.

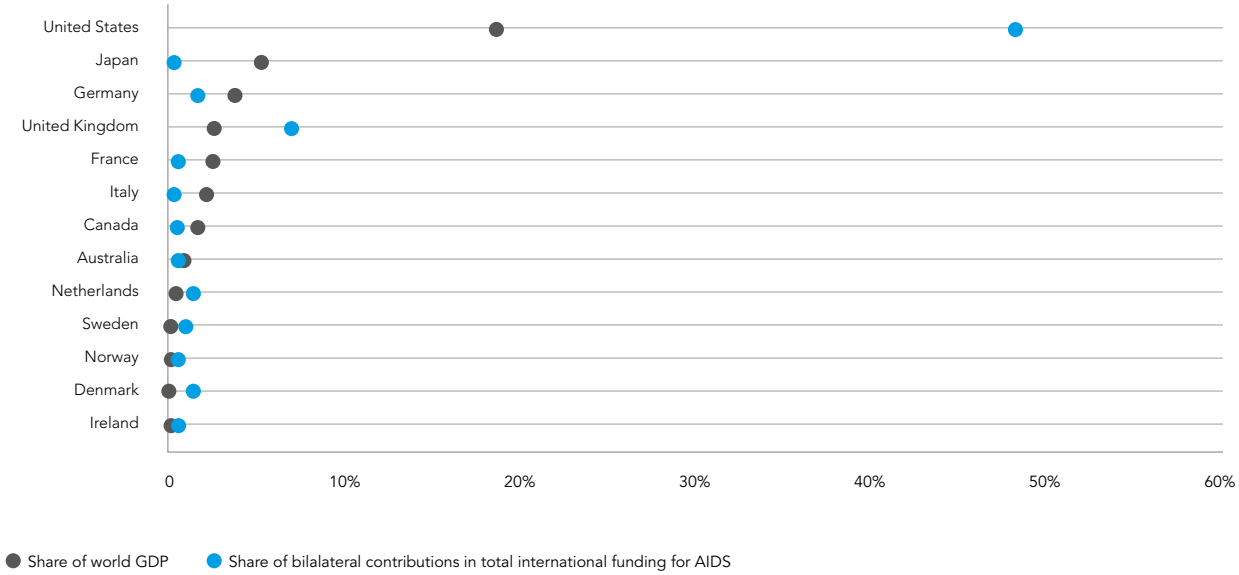
INTERNATIONAL HIV ASSISTANCE RECOVERS

International investment in HIV programmes reached an estimated US$ 8.9 billion in 2012, an 8% increase on amounts available from the international community in 2011 (see Figure 6.3). Bilateral aid (that is, funds disbursed directly from a donor country to a recipient country) accounted for approximately 67% of international contributions, with the remainder provided through multilateral (28%) and philanthropic channels (5%).

In 2012, HIV disbursements by donor governments, bilaterally and multilaterally, and by private philanthropic funders increased nominally but remained essentially flat in real terms. This nominal increase was primarily driven by an acceleration of bilateral disbursements by the US government, whereas most recent resource-tracking investigations suggest that most European donor governments decreased their HIV assistance in 2012. Without renewed commitment from international donors, it is projected that international funding for HIV activities will not grow in coming years.

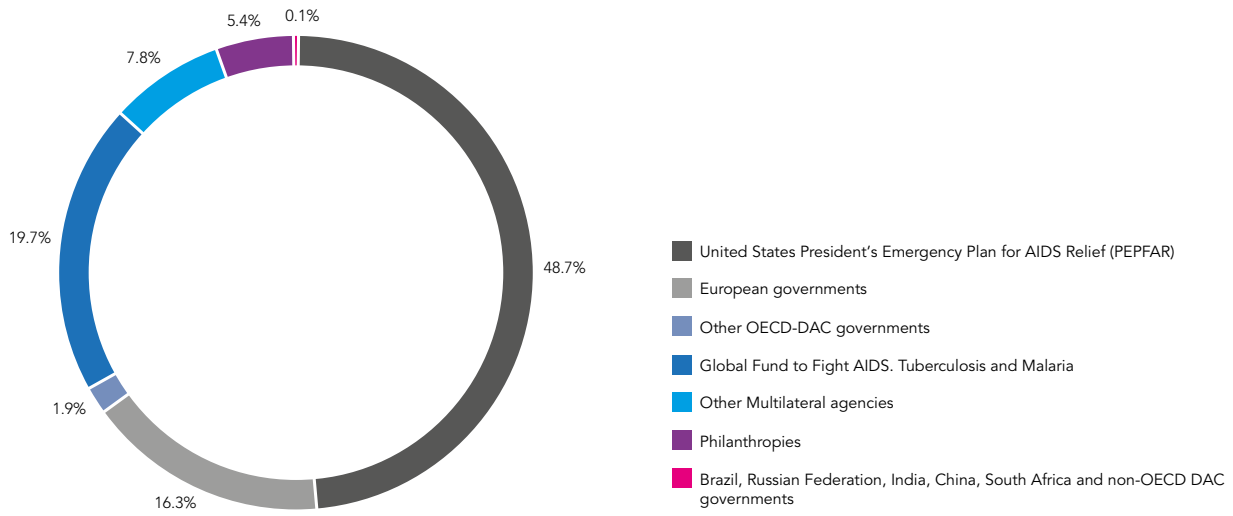
As shown in Figure 6.4, in 2012 the US President's Emergency Plan for AIDS Relief (PEPFAR), a bilateral aid programme, made up approximately 73% of all bilateral aid for HIV, almost half (48.7%) of all international HIV contributions and 23% of total HIV funding available from all sources (including international, domestic, public and private). The UK accounted for an estimated 10.7% of all bilateral funding available in 2012, followed by the Netherlands (2.8%), Denmark (2.6%) and Germany (2.4%). A number of countries – including Denmark, Ireland, the Netherlands, Norway, Sweden, the UK and the US – contributed a share of international HIV funding that exceeds their respective share of global gross domestic product.

FIGURE 6.3
Share of international HIV funding versus share of global GDP, selected countries, 2012



Source: IMF on the share of world GDP; UNAIDS estimates on share of international funds

FIGURE 6.4
International assistance funding for HIV, 2012



Source: UNAIDS estimates

A sizeable proportion (28%) of all international assistance is provided through multilateral institutions, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the global health organization UNITAID, and United Nations agencies. Multilateral funding accounted for 13% of total funding available for HIV activities from all sources (including international, domestic, public and private). Private philanthropic funders in the US and the European Union contributed more than 5% of international HIV assistance disbursed in 2012.

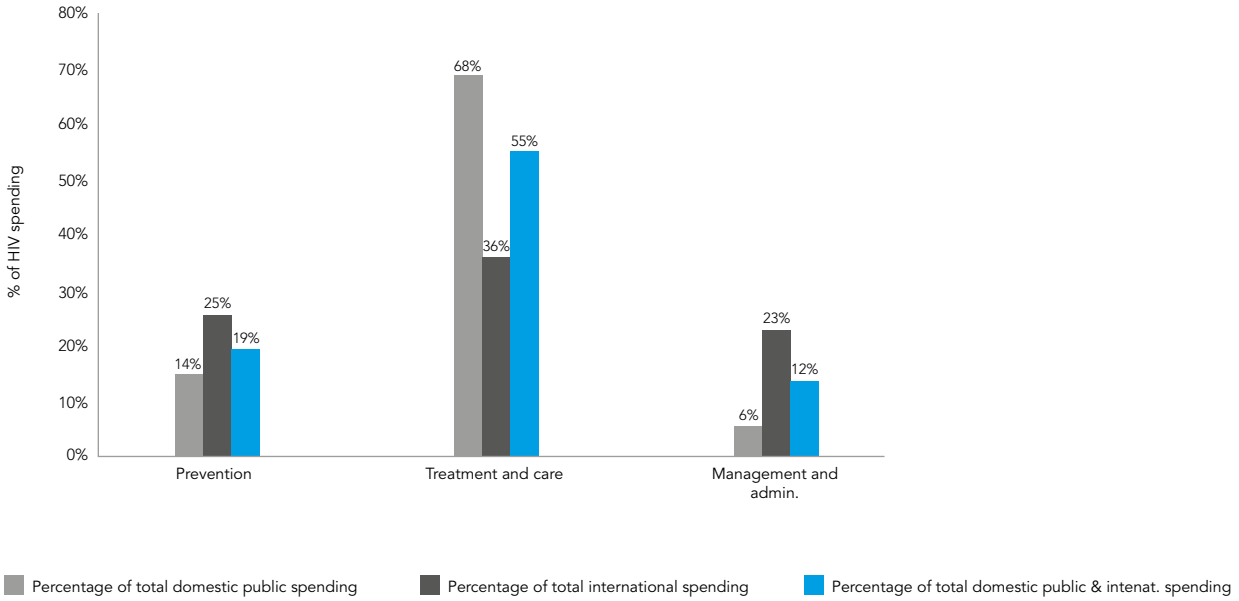
HIV SPENDING PATTERNS: WHO PAYS FOR WHAT?

Care and treatment services consumed more than half (55%) of HIV expenditure in 2012, while prevention programmes represented 19% of HIV spending, a share that has remained relatively stable in recent years (see Figure 6.5). A notable share (12%) of spending supported programme management and administration.

Whereas domestic resources account for the majority of spending for HIV treatment and care, international spending financed the majority of HIV prevention efforts. Nearly one-quarter of international HIV spending (23%) supports programme management and administration. It has to be noted, however, that the latter also covers investment in health systems, for example strengthening national drug supply systems.

FIGURE 6.5

Distribution of HIV spending by programme categories and funding source, low- and middle-income countries, latest data available as of 2013



Source: GARPR 2013.

PERSISTENT DEPENDENCY ON INTERNATIONAL FINANCING

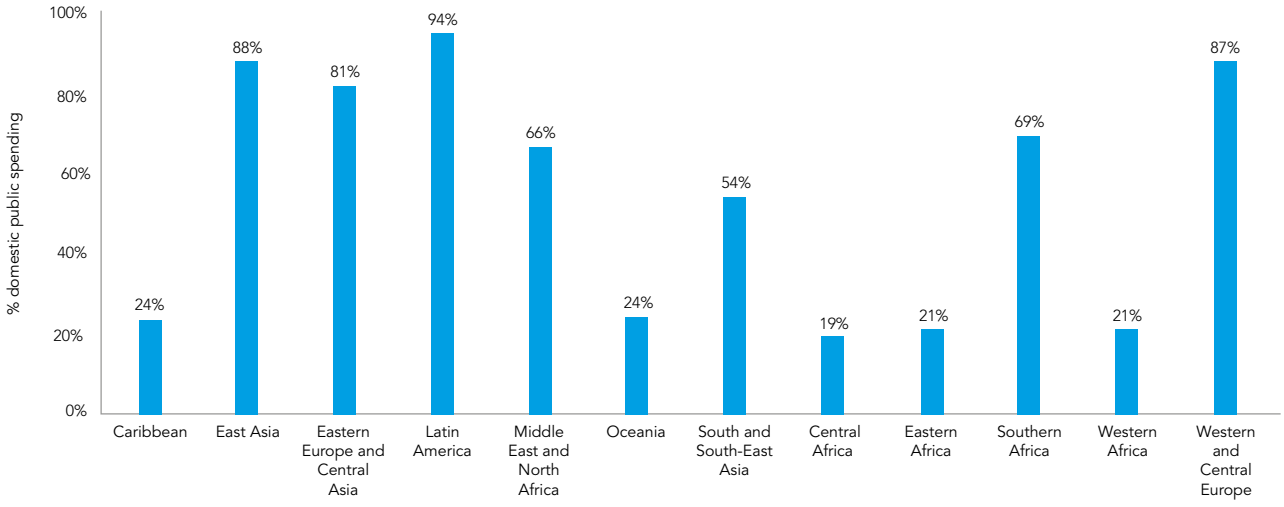
Based on the latest data officially reported to UNAIDS, low-income countries received 56% of international HIV spending, followed by lower-middle-income countries (26%) and upper-middle-income countries (18%). Consistent with these patterns, low-income countries remain the most dependent on international financing for their HIV responses, with domestic resources making up only 16% of HIV funding. Donor dependency also represents a challenge to the sustainability of HIV responses in lower-middle-income countries, where domestic sources account for only 27% of HIV funding overall. By contrast, upper-middle-income countries themselves contribute 88% of costs associated with HIV activities.

The differences in funding patterns based on national income are reflected in regional differences in the mix of HIV financing. In Latin America, East Asia, Eastern Europe and Central Asia, domestic sources account for more than 80% of HIV spending (see Figure 6.6). Domestic sources also account for 69% of HIV spending in Southern Africa, as the foundation for a sustainable response has been established in many countries, especially in upper-middle-income countries in Southern Africa with a high burden of disease.

Fifty-one low- and middle-income countries looked to international assistance for 75% or more of HIV financing in 2012. Twenty-nine countries used domestic resources to finance at least 75% of the cost of HIV activities (see Table 6.1).

FIGURE 6.6

Domestic public spending as a percentage of total domestic public and international spending in low- and middle-income countries, latest data available in 2013



Source: GARPR 2013.

TABLE 6.1

Dependency of the national HIV response on international sources

Funding from international sources as a percentage of the total international and domestic public funding in low- and middle-income countries, latest reports available as of 2013

0–24%

Algeria 2012
Argentina 2010
Botswana 2011
Brazil 2010
Chile 2012
China 2012
Colombia 2011
Costa Rica 2010
Cuba 2011
Democratic People's Republic of Korea 2011
Dominica 2011
Ecuador 2010
Gabon 2012
Iran (Islamic Republic of) 2009
Kazakhstan 2012
Latvia 2011
Lithuania 2012
Malaysia 2012
Mexico 2009
Panama 2010
Romania 2012
Russian Federation 2008
Seychelles 2012
South Africa 2009
Syrian Arab Republic 2011
Thailand 2011
Turkey 2012
Uruguay 2007
Venezuela (Bolivarian Republic of) 2011

25–49%

Angola 2011
Azerbaijan 2011
Bulgaria 2011
Cape Verde 2012
Egypt 2008
El Salvador 2012
Grenada 2011
Guatemala 2012
Honduras 2010
Lebanon 2011
Marshall Islands 2012
Mauritius 2010
Morocco 2012
Namibia 2010
Peru 2010
Philippines 2011
Samoa 2011
Serbia 2012
Sri Lanka 2010
The former Yugoslav Republic of Macedonia 2010
Ukraine 2010
Uzbekistan 2012

50–74%

Albania 2005
Antigua and Barbuda 2012
Belarus 2011
Belize 2010
Benin 2012
Cameroon 2010
Chad 2012
Congo 2010
Dominican Republic 2008
Georgia 2012
Indonesia 2010
Jamaica 2010
Kyrgyzstan 2012
Madagascar 2012
Mongolia 2011
Nicaragua 2010
Niger 2012
Nigeria 2010
Pakistan 2010
Palau 2011
Paraguay 2011
Republic of Moldova 2012
Saint Vincent and the Grenadines 2012
Suriname 2011
Swaziland 2009
Togo 2012
United Republic of Tanzania 2005
Yemen 2011

75–100%

Afghanistan 2012
Armenia 2012
Bangladesh 2012
Bolivia (Plurinational State of) 2011
Bosnia and Herzegovina 2009
Burkina Faso 2010
Burundi 2012
Cambodia 2012
Central African Republic 2011
Comoros 2012
Côte d'Ivoire 2009
Democratic Republic of the Congo 2010
Djibouti 2012
Eritrea 2009
Ethiopia 2008
Fiji 2012
Gambia 2008
Ghana 2011
Guinea 2012
Guinea-Bissau 2010
Haiti 2011
Jordan 2012
Kenya 2011
Kiribati 2012
Lao People Democratic Republic 2011
Liberia 2011
Malawi 2011
Mali 2010
Mauritania 2012
Micronesia (Federated States of) 2012
Montenegro 2009
Mozambique 2008
Myanmar 2011
Nepal 2009
Papua New Guinea 2010
Rwanda 2009
Saint Lucia 2007
São Tomé and Príncipe 2012
Senegal 2011
Sierra Leone 2009
Solomon Islands 2011
Somalia 2009
Tajikistan 2011
Timor-Leste 2009
Tunisia 2011
Tuvalu 2011
Uganda 2008
Vanuatu 2012
Viet Nam 2010
Zambia 2006
Zimbabwe 2012

Never reported or no recent disaggregated data

India 2011
Lesotho 2010
Tonga 2011
Bhutan
Guyana
Iraq
Libya
Maldives
Slovakia
Turkmenistan

Source: GAPR 2013.

LOOKING FORWARD

Closing the AIDS resource gap has been identified as a national priority in 99 of the 109 countries that reported results of mid-term reviews. In 91 countries, the target has been integrated in national strategic plans. Forty per cent of the countries that formally prioritize closing the AIDS resource gap (39 out of 99) report that they are not on track to reach their resource mobilization targets by 2015.

To meet the 2015 resource target, at least US$ 2.9–5.4 billion in additional annual funding needs to be generated. In their mid-term reviews, countries identified several strategies for closing the resource gap, with priority approaches varying little depending on regional, epidemic type or socio-economic context.

First and foremost, countries identified the need for high-level, sustained leadership and commitment to ensure sufficient national investments commensurate with national ability to pay, burden of disease and rate of economic growth. Mid-term reviews emphasized the importance of developing resource mobilization plans that clearly identify potential national and international sources of funding. As important strategies to close the resource gap, countries stressed the need to forge and strengthen public-private partnerships that leverage private sector resources as well as innovative mechanisms for sustainable funding, such as fund pooling, inclusion of HIV services in national social protection and health insurance schemes and use of different levies or taxes to generate new funding.

Mid-term reviews urgently called on the international community not to abandon the HIV response, especially at a moment when historic progress could be jeopardized by funding uncertainties. Even with increased domestic allocations, some countries, especially those with few resources and heavy HIV burdens, will be unable to close their resource gap without external assistance. For example, Malawi estimates that domestic resources are sufficient to cover only 30% of the HIV resource gap. Similarly, Viet Nam, which has committed to increase domestic HIV funding by 20% annually during 2012–2020, nevertheless projects that it will need US$ 100 million per year in external aid to ensure an effective HIV response.

UNAIDS has urged countries to pursue an investment approach to HIV financing, focusing limited resources on interventions, settings and populations where impact is likely to be greatest. Recognizing the difficult international funding climate, as well as the urgent need to lay the groundwork for a sustainable response, a growing number of countries are developing 'investment cases' that promote mobilization of sufficient resources to do the 'right things' at the 'right scale' in order to maximize impact and minimise future costs. Jamaica, Nigeria and Thailand have already developed their investment cases, while several other countries have initiated processes to develop them.

Sustainability of HIV financing – increased domestic funding through innovative mechanisms

In 2012, the African Union (AU) took the visionary step of articulating a *Roadmap on Shared Responsibility and Global Solidarity for the AIDS, tuberculosis and Malaria Response in Africa*.[2] The first pillar of the roadmap stressed the need for sustainable HIV financing through diversified funding sources for AIDS, tuberculosis and malaria programmes in the region.

Consistent with the AU Roadmap's emphasis on innovative approaches to resource mobilization, several African countries have explored a variety of strategies to generate substantial new domestic funding for the HIV response. Several countries, such as Ethiopia, Malawi and Namibia, are 'mainstreaming' HIV funding, requiring diverse government entities to allocate at least 2% of their budgets to HIV activities. Kenya, the United Republic of Tanzania and Zambia are considering options for establishing HIV trust funds. For the last 12 years, Zimbabwe has instituted a National HIV and AIDS levy as a component of the national tax system, and is now exploring ways to tap in to private and informal sector contributions to this levy. Seeking ways to diversify and increase domestic investment in AIDS, Malawi has projected that, by allocating to HIV programmes 1% of an existing 5% levy on the operating surpluses of telecommunication firms, up to US$ 2.4 million would be generated by 2013. Simultaneously, by introducing a levy of 3 cents per minute for calls terminated in Malawi, US$ 5.3 million could be generated for HIV funding by 2013. Likewise, Namibia aims to generate US$ 4.1 million by 2020 through an airline levy of US$ 5 per passenger on outbound flights.

While the need to reduce dependency on international HIV funding is especially pressing in sub-Saharan Africa, countries in other regions are also working to generate sustainable funding by integrating HIV with broader health sector funding instruments. For example, Moldova has provided treatment for HIV and opportunistic infections through its national health insurance system, which was launched in 2004. Since 2005, Thailand has similarly provided access to free antiretroviral therapy and voluntary HIV counselling and testing as part of its universal health insurance scheme. In addition, India and Georgia are also making plans to include essential HIV services in the standard benefit package of their universal health insurance systems.

Nigeria investment case

To implement the commitments in the 2011 UN Political Declaration on HIV and AIDS and accelerate progress towards universal access to HIV prevention, treatment, care and support, Nigeria has developed the President's Comprehensive Response Plan (PCRP).[3] Nigeria has the second-largest population of people living with HIV, with only one-third of treatment-eligible individuals receiving HIV treatment and only 18% of HIV-positive pregnant women receiving antiretroviral medicines to prevent mother-to-child transmission.

PCRP aims to bridge the current gap in service provision and funding, offering an investment case for HIV financing. The investment case assesses needs and gaps, identifies focus areas, quantifies the degree of scale-up required to close gaps, projects financing needed and analyses expected impact in terms of lives saved, new infections averted and costs saved.

As priorities for scale-up over the next three years, PCRP identified prevention of sexual transmission among young people and key populations at higher risk, HIV counselling and testing, provision of treatment and care for those in need and prevention of mother-to-child transmission. PCRP set target coverage levels for priority interventions, such as a 140% increase in HIV prevention efforts among key populations and a 400% increase in the provision of antiretroviral therapy to pregnant women.

Nigeria projects that implementation of the President's plan would save 46 000 lives and avert 105 000 new infections by 2015. It is projected that PCRP would save the lives of 13 000 children and avert 55 000 new infections among children. Total cost savings are projected at US$ 1.65 billion through delayed or averted HIV treatment costs.

To implement the plan, it will need to be funded. It is anticipated that total HIV investment in Nigeria would need to increase by 37%. PCRP calls for domestic investment to rise by 73%, which would increase the proportion of overall domestic spending on HIV from 25% to 45% during 2014–2015. However, it is projected that domestic spending alone will not be able to close the country's resource gap. To further contribute to needed resource mobilization, PCRP calls for reductions in programme management costs, which are projected to save US$ 27.3 million that can be reinvested in prevention activities.

7. ELIMINATE GENDER INEQUALITIES AND GENDER-BASED ABUSE AND VIOLENCE AND INCREASE THE CAPACITY OF WOMEN AND GIRLS TO PROTECT THEMSELVES FROM HIV

HIV continues to be driven by gender inequalities and harmful gender norms that promote unsafe sex and reduce access to HIV and sexual and reproductive health services for men, women and transgender persons. The epidemic imposes a particular burden on women and girls. In addition to their greater physiological susceptibility to HIV acquisition, the pervasive social, legal and economic disadvantages faced by women reduce their ability to protect themselves from HIV infection, and diminish access to essential HIV and reproductive health services, in particular for women living with HIV. Women and girls also shoulder the primary care-giving burden, typically providing such vital services without compensation. Although country reports demonstrate recognition that gender equality is vital to an effective HIV response, focused investments and enhanced political leadership will be needed to reach the global goal of eliminating gender inequalities and gender-based abuse and violence and increasing the capacity of women and girls to protect themselves from HIV.

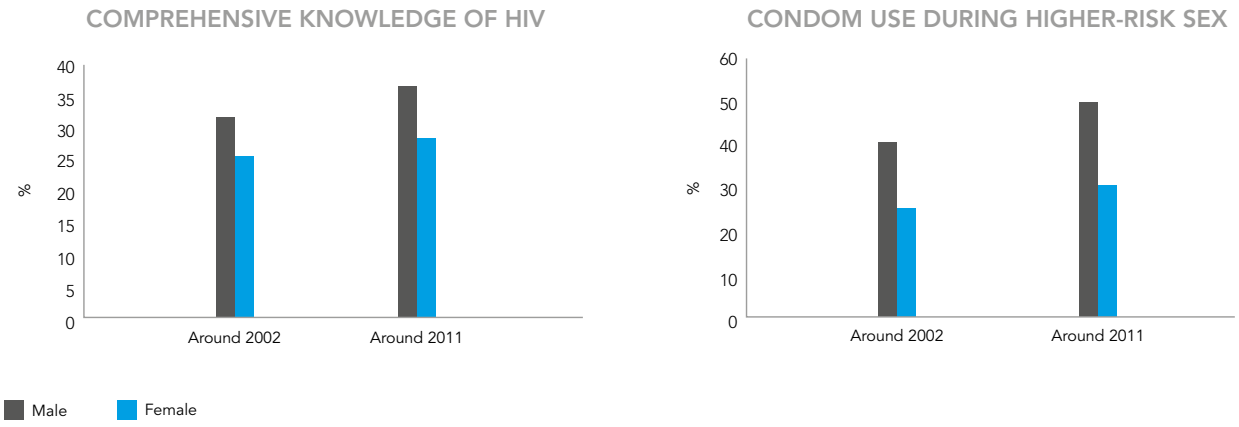
ENDURING IMPACT OF GENDER INEQUALITY ON HIV EPIDEMICS

Globally, women comprise 52% of all people living with HIV in low- and middle-income countries, and men 48%. However, in sub-Saharan Africa, the centre of the global epidemic, women still account for approximately 57% of all people living with HIV.

In addition to the greater physiological vulnerability of women to HIV, gender inequalities include vulnerability to rape, sex with older men,[1] and unequal access to education[2] and economic opportunities.[3] These make HIV-related risks especially acute for girls and young women. In comparison to men, women are more likely to acquire HIV at an early age, resulting in a global HIV prevalence among girls and young women that is double or greater than among males of the same age.[4]

In sub-Saharan Africa, national surveys find that young women (age 15–24 years) have lower levels of accurate and comprehensive HIV knowledge than young men of their own age. Young women in sub-Saharan Africa are also less likely to report having used a condom the last time they had sex (see Figure 7.1).

FIGURE 7.1
HIV knowledge and condom use during higher risk sex, young men and women (15–24 years), around 2002 and 2011 in Sub-Saharan Africa



Source: DHS data, countries with available data in Sub-Saharan Africa

In addition to the direct health impact of HIV infection, the epidemic also undermines the health and wellbeing of women in other ways. In settings with high HIV prevalence, young women aged 15–24 experience tuberculosis rates 1.5–2 times higher than men in the same age group.[5] Women living with HIV also face a heightened risk of cervical cancer, underscoring the urgency of ensuring women's access to HIV testing and treatment together with comprehensive sexual and reproductive health services.[6] They also face significant barriers to accessing services due to economic constraints and gender-related discrimination.[7] Moreover, the disproportionate care-taking burden shouldered by women and girls diminishes their educational and economic opportunities.[8]

Women from key populations are particularly affected by HIV. Among female sex workers, global HIV prevalence is estimated at 12%, increasing to approximately 30% in settings with medium to high HIV prevalence.[9] Though data are scarce, a global review of available data found that transgender women are 49 times more likely to be living with HIV than women overall, with a pooled HIV prevalence among transgender women of 19%.[10]

Although particular attention has focused on the need for gender-sensitive responses in sub-Saharan Africa, women, particularly those from key populations, face significant risk of HIV acquisition and shoulder a disproportionate socio-economic burden in concentrated epidemics, as well. In the Asia and Pacific region, where men outnumber women among people living with HIV, women in HIV-affected households are more likely to be in debt and to assume the bulk of care tasks.[11]

The vulnerability of transgender women to acquiring HIV is also increased as a result of gender inequalities. Manifestations include the non-recognition of gender identity, which results in denial of basic citizenship rights, such as access to accurate personal identification documents. As a result, transgender women are often unable to access HIV services and encounter discriminatory treatment by health service providers.[12]

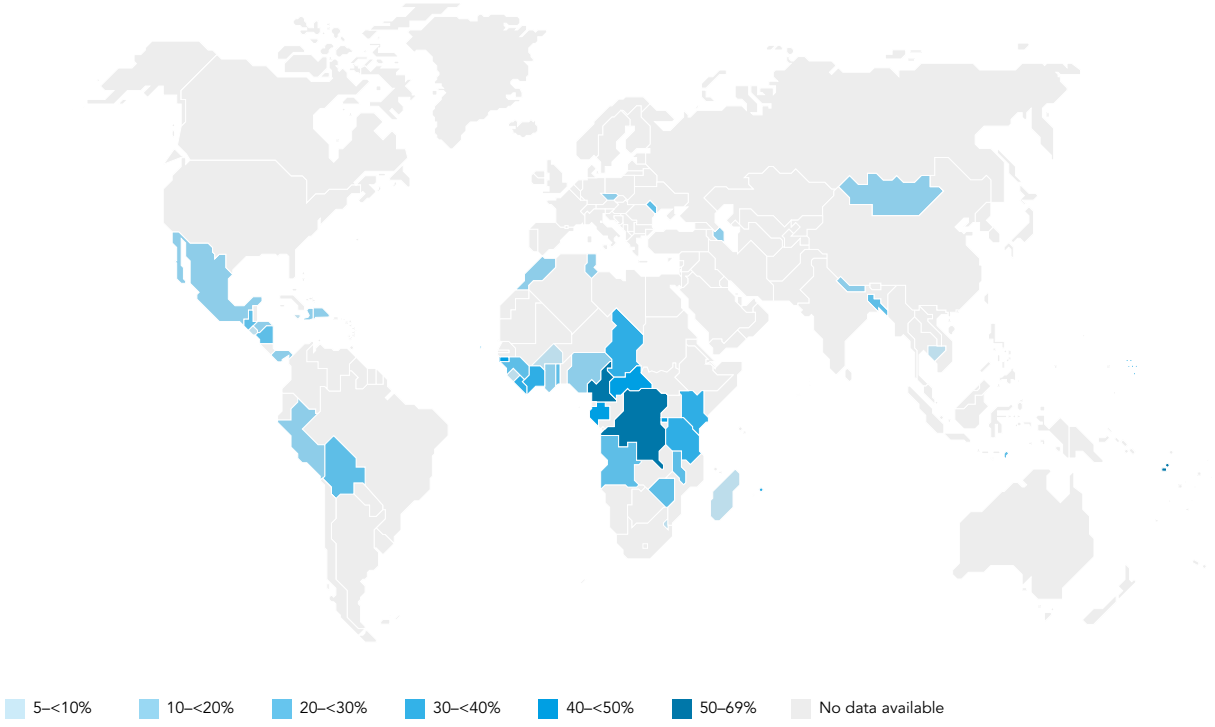
Unequal gender norms also undermine effective HIV responses for men. Prevailing concepts of masculinity encourage men's sexual risk-taking and discourage men from seeking health and HIV services.[13] In addition, health services are often not designed to suit the needs of men, with opening hours that clash with work obligations and providers' frequent lack of sensitivity to men's needs.[14] As a result, men are less likely to be tested for HIV, have lower CD4 counts when they enter treatment and are less likely to adhere to treatment.[15,16] Consequently, men receiving antiretroviral therapy have consistently higher AIDS-related mortality rates than women.[17,18]

GENDER-BASED VIOLENCE AND WOMEN'S VULNERABILITY TO HIV

Gender-based violence is a worldwide phenomenon and a serious violation of human rights. Of the almost 50 countries that reported data on the prevalence of intimate partner violence, between 9% and 60% of women aged 15 to 49 years reported having experienced violence at the hands of an intimate partner in the last 12 months (see Figure 7.2).

Gender-based violence increases the risk of HIV infection. Two recent studies of women in Uganda (15–49 years) and South Africa (15–26 years) found that women who had experienced intimate partner violence were 50% more likely to have acquired HIV than women who had not experienced violence.[19,20]

FIGURE 7.2
Intimate partner violence in the past 12 months reported by women aged 15–49 years



Source: GARPR 2013

Women from key populations, such as female drug users, female sex workers and transgender women, are particularly likely to experience violence.[21,22] Studies in different countries have detected the high prevalence of rape, physical violence and other forms of abuse among sex workers.[23,24] Women in conflict-affected situations face increased vulnerability to sexual violence and mass rapes during conflicts.[25] Transgender women, many of whom may be engaged in sex work as a survival strategy, are also often targets of violence and abuse.[26] The 'corrective' rape of lesbian women is a further source of trauma and HIV risk.

The links between violence against women and increased risk for HIV are multi-faceted: social, physiological and psychological. The experience of violence during childhood is associated with increased risk-taking later in life.[27] Fear of violence undermines the capacity of women and girls to negotiate safer sex.[28] Concerns regarding the possibility of stigma and discrimination, abuse and violence further deter women from seeking HIV testing or other essential health services. Sexual violence may result in traumatic injury to women's genitalia, which in turn increases susceptibility to HIV acquisition; with physiological susceptibility being greater in cases of experience of sexual violence as a child or adolescent and repeated violence.[29] Results of violence may be especially severe for women who are sex workers, use drugs or are transgender, as a result of the compounding effects of multiple forms of stigma and mistreatment.

One study in Uganda found that 29% of surveyed women living with HIV reported physical or sexual intimate-partner violence in the last 12 months, and that those on antiretroviral treatment were twice as likely to report intimate-partner violence.[30] This violence may be partly attributable to the fact that women, who have higher testing rates, are more likely to be the first within a household to learn their HIV status and may be blamed accordingly.

Despite the disturbing prevalence and severe effects of gender-based violence, services for women who have experienced violence remain wholly inadequate. A recent survey in Kenya found that only one-quarter of females and 13% of males aged 18 to 24 who experienced sexual violence prior to age 18 knew of a place to seek services.[31]

POLICIES FOR GENDER-TRANSFORMATIVE HIV RESPONSES

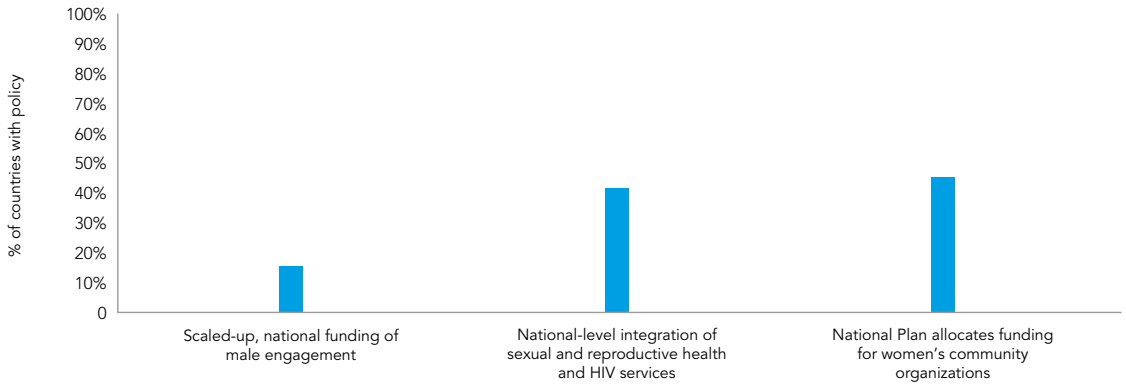
Increasingly, HIV responses are incorporating a focus on gender equality. This focus is especially common in sub-Saharan Africa but less prominent in countries where epidemics are concentrated among key populations.[32] In the Middle East and North Africa and in Eastern Europe and Central Asia, gender issues, including gender-based violence, often go unaddressed in national responses, with little sex-disaggregated data collection or participation of women's networks and groups of women living with HIV.

Reports from countries that conducted mid-term reviews of implementation of the 2011 UN Political Declaration on HIV/AIDS reveal widespread recognition that addressing gender inequalities is a critical component of an effective HIV response for women. One hundred of the 109 countries reporting in 2013 indicated that elimination of gender inequalities is a national priority. However, only 52% of countries reported in 2013 that they were on track to eliminate gender inequalities. While commitments by national governments are encouraging, there is an urgent need to see them more consistently translated into robust actions.

Figure 7.3 suggests that country policies and resource allocation are particularly lagging behind in key aspects of a comprehensive effort to overcome gender inequality: engaging men and empowering women, as well as providing services to help women fulfil their sexual and reproductive needs and rights and to access HIV prevention and other HIV services. Barely half of countries collect data on the links between HIV and gender-based violence, and less than one-quarter of national HIV strategic plans address gender-based violence.[33]

FIGURE 7.3

Policies on key elements of gender-transformative HIV programming in 72 countries



Source: UNAIDS Agenda for Accelerated Country Action for Women, Girls, Gender Equality and HIV Mid-Term review, report to UNAIDS PCB 2012.

MOVING FORWARD

To achieve zero new HIV infections, zero AIDS-related deaths and zero discrimination, there should be zero tolerance for gender-based violence. Towards this end, sustained progress is needed to eliminate gender inequality. Effective HIV responses must respond to, and seek to transform, harmful gender norms that perpetuate the HIV epidemic. While much has been done, investment by countries is required in a number of strategic areas with the support of civil society and development partners.

Specifically, countries should work to reduce HIV infection among girls and young women by protecting them from sexual violence and providing universal access to comprehensive sex education and social protection services. To ensure access, girls and young women may require independent access points for needed services. Policy and programmatic steps are needed to transform harmful gender norms to prevent gender-based violence and provided integrated services to survivors of gender-based violence.

HIV services need to be more sensitive to sexual and reproductive health and gender needs and rights of women, men and transgender persons in all their diversity, in particular those living with HIV, from key populations at higher risk or living in conflict-affected settings. There is a need to invest in strengthening the evidence base in order to successfully respond to the gender dimensions of the HIV epidemic. Epidemic contexts and responses should be surveyed from the perspective of gender and inclusive and participatory assessments undertaken.

The needs of women and girls must be prioritized in the post-2015 development agenda. The goals of zero discrimination, zero tolerance for gender-based violence, and zero violation of sexual and reproductive health and rights should be at the centre of development policy at national and international levels in discussions regarding post-2015 priorities.

ENGAGING THE TRANSGENDER COMMUNITY IN NICARAGUA

Nicaragua's female transgender community is estimated at 3 000 people, with an estimated HIV prevalence of 15–19%. To address the transgender community's health care needs, nine organizations joined together to formulate the Strategic Plan of Comprehensive Care for the Transgender Population.

The process of developing the plan included a situation analysis, prioritization of interventions, planning and identification of resources. A review of available evidence on underlying determinants of the epidemic among transgender populations identified the most robust studies on socio-economic factors, life and work conditions, health services, biological and genetic factors, social and community networks and behaviours.

The plan aims to close gaps relating to social determinants of HIV risk and vulnerability for transgender people in Nicaragua. Key action steps include advocacy for legal changes, human rights promotion, fund-raising, training workshops, health education and behaviour change communication. Although the plan is both ambitious and visionary, more than 80% of transgender participants in the planning process identified the proposed actions as feasible.

Political leadership on gender-transformative responses in Liberia and Rwanda

Liberia's HIV response now includes a cadre of civil society organizations such as the Catholic and Lutheran churches, the Concerned Muslims of Liberia, traditional leaders and the Liberian Women Living with HIV Network that actively champions HIV and gender issues. Women living with HIV, together with the Ministry of Gender and Development, are also represented on the Global Fund Country Co-ordinating Mechanism - the highest in-country decision-making body of the Global Fund to fight AIDS, Tuberculosis and Malaria.

The National AIDS Commission, chaired by the President, was formed by an Act of Parliament. It includes representation from women living with HIV and the Ministry of Gender and Development and has an annual statutory budget allocation from the Government. An HIV Office in the Ministry of Gender and Development has been established and largely funded by the Government to co-ordinate work on AIDS and gender and an amendment to the Health act has been passed into law to protect the rights of people including women living with HIV.

A mid-term review in 2012 of Liberia's national operational plan on Women and Girls, Gender Equality and HIV found that the plan had resulted in a stronger national AIDS response, with new linkages to broader efforts against gender-based violence and strengthened capacity within the Government. The plan was launched in 2010 by President Ellen Johnson Sirleaf, accompanied by UNAIDS Executive Director, Michel Sidibe and Princess Mathilda of Belgium in order to contribute to rebuilding the country's health system, which had been destroyed by the civil war, and to stop the high rates of rape and sexual violence against girls and women.

8. ELIMINATE HIV-RELATED STIGMA, DISCRIMINATION, PUNITIVE LAWS AND PRACTICES

HIV-related stigma and discrimination persist as major obstacles to an effective HIV response in all parts of the world. The People Living with HIV Stigma Index and other research have quantified and enhanced understanding of the prevalence and impact of stigma and discrimination, with a notable share of people living with HIV reporting having encountered employment discrimination and denial of family planning, dental and other health services (Table 8.1).

EFFECTS OF STIGMA AND DISCRIMINATION

Numerous studies have linked HIV-related stigma with delayed HIV testing, non-disclosure to partners and poor engagement with HIV services.[1,2,3,4] Stigma and discrimination persist within many health care facilities, with people living with HIV experiencing judgemental attitudes from providers and refusal of services. There have been numerous reports of involuntary sterilization of women living with HIV, including instances that resulted in legal action in several countries, such as Chile,[5] Kenya[6] and Namibia[7].

People who experience stigma and discrimination report a range of negative effects, including loss of income, isolation from communities and inability to participate as a productive member of society as a result of their HIV status. According to surveys conducted via the People Living with HIV Stigma Index, instances of stigma and discrimination exact profound psychological costs, resulting in feelings of guilt, shame and suicidal thoughts. As a result of the pernicious effects of stigma and discrimination, on both people living with HIV and the effectiveness of HIV programmes, the Global Commission on HIV and the Law urged that countries take immediate steps to repeal punitive laws and prohibit discrimination.[8]

LEGAL PROTECTION AGAINST HIV DISCRIMINATION

Protective laws, adequately resourced and enforced, help broaden access to essential health and social services, enhance the quality and effectiveness of services and protect people living with or vulnerable to HIV from stigma, discrimination and violence. In 2012, 61% of countries reported the existence of anti-discrimination laws that protect people living with HIV.

TABLE 8.1

People living with HIV reporting being denied health services and jobs in the last 12 months because of their HIV status, selected countries, 2008–2013

	DENIED HEALTH AND/OR DENTAL SERVICES (%)	DENIED FAMILY PLANNING SERVICES (%)	REFUSED EMPLOYMENT (%)
Argentina	16	45	13
Bangladesh	4	4	9
Belarus	18	19	6
Bolivia	19	5	10
Cameroon	2	3	7
China	12	...	15
Colombia	27	...	9
Democratic Republic of the Congo	6	...	13
Dominican Republic	8	2	10
Ecuador	20	5	10
El Salvador	8	4	3
Ethiopia	7	6	21
Fiji	13	11	14
Germany	19	...	...
Guatemala	6	10	3
Jamaica	3	...	...
Malawi	5	8	...
Malaysia	...	...	12
Mexico	14	2	5
Moldova	13	2	5
Myanmar	10	35	15
Nepal	21	3	4
Nigeria	21	6	...
Pakistan	33	3	35
Paraguay	17	4	9
Philippines	8	6	...
Poland	20	3	11
Russia	10	5	3
Rwanda	13	88	37
South Africa (O.R. Tambo Region, Eastern Cape)	5	7	3
Sri Lanka	...	...	4
Swaziland	4	1	3
Thailand	20	14	26
Ukraine	20	3	8
Zambia	8	10	17

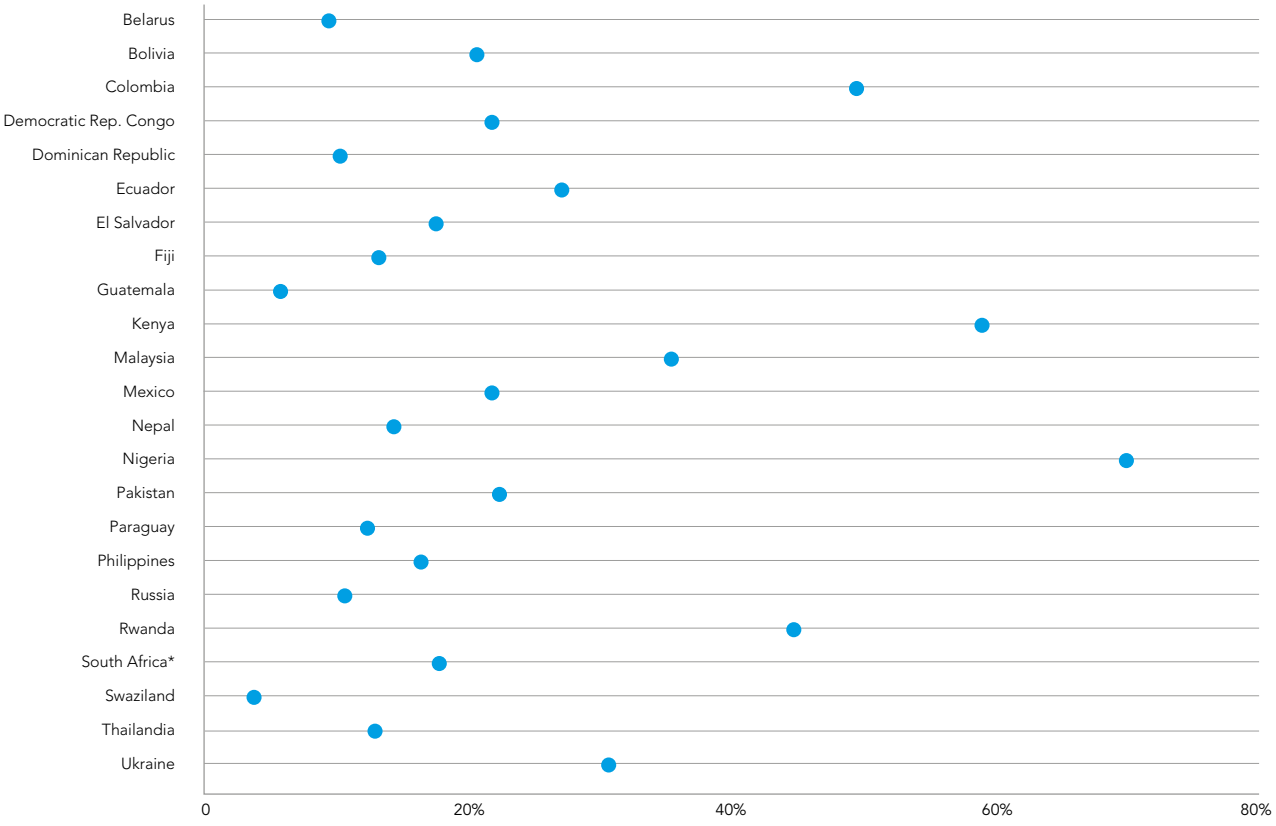
Source: Surveys conducted using People Living with HIV Stigma Index, www.stigmaindex.org

However, many who experience rights abuses do not obtain redress through legal means.[9] In 17 out of 23 countries where the People Living with HIV Stigma Index research was conducted, less than 30% of people living with HIV who have experienced rights violations reported having sought legal redress (regardless of whether redress was successful) (see Figure 8.1).

To ensure access to legal redress, HIV-related legal services must be in place for people living with HIV. In 2012, 55% of countries reported the existence of HIV-related legal services (compared to 45% in 2008), while 57% indicated that judges and magistrates had received training on HIV discrimination (up from 46% in 2008). Countries reporting the existence of free or reduced-cost legal services to people living with HIV through private sector law firms or university-based centres increased from 39% in 2008 to 52% in 2012 (see Figure 8.2).

FIGURE 8.1

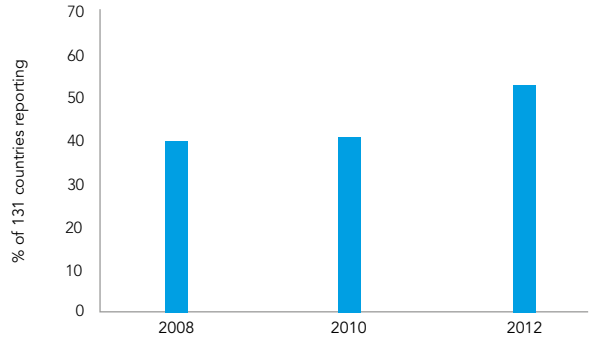
People living with HIV whose rights have been violated and who sought legal redress, selected countries, 2008–2013



Source: Surveys conducted using People Living with HIV Stigma Index, selected countries 2008–2013, www.stigmaindex.org

*O.R. Tambo Region, Eastern Cape

FIGURE 8.2
Countries where private-sector law firms or university-based centres provide free or reduced-cost legal services to people living with HIV



Source: 2008, 2010, 2012 NCPI country reporting, nongovernmental sources (www.unaids.org/ncpi)

CRIMINALIZATION OF HIV NON-DISCLOSURE, EXPOSURE AND TRANSMISSION

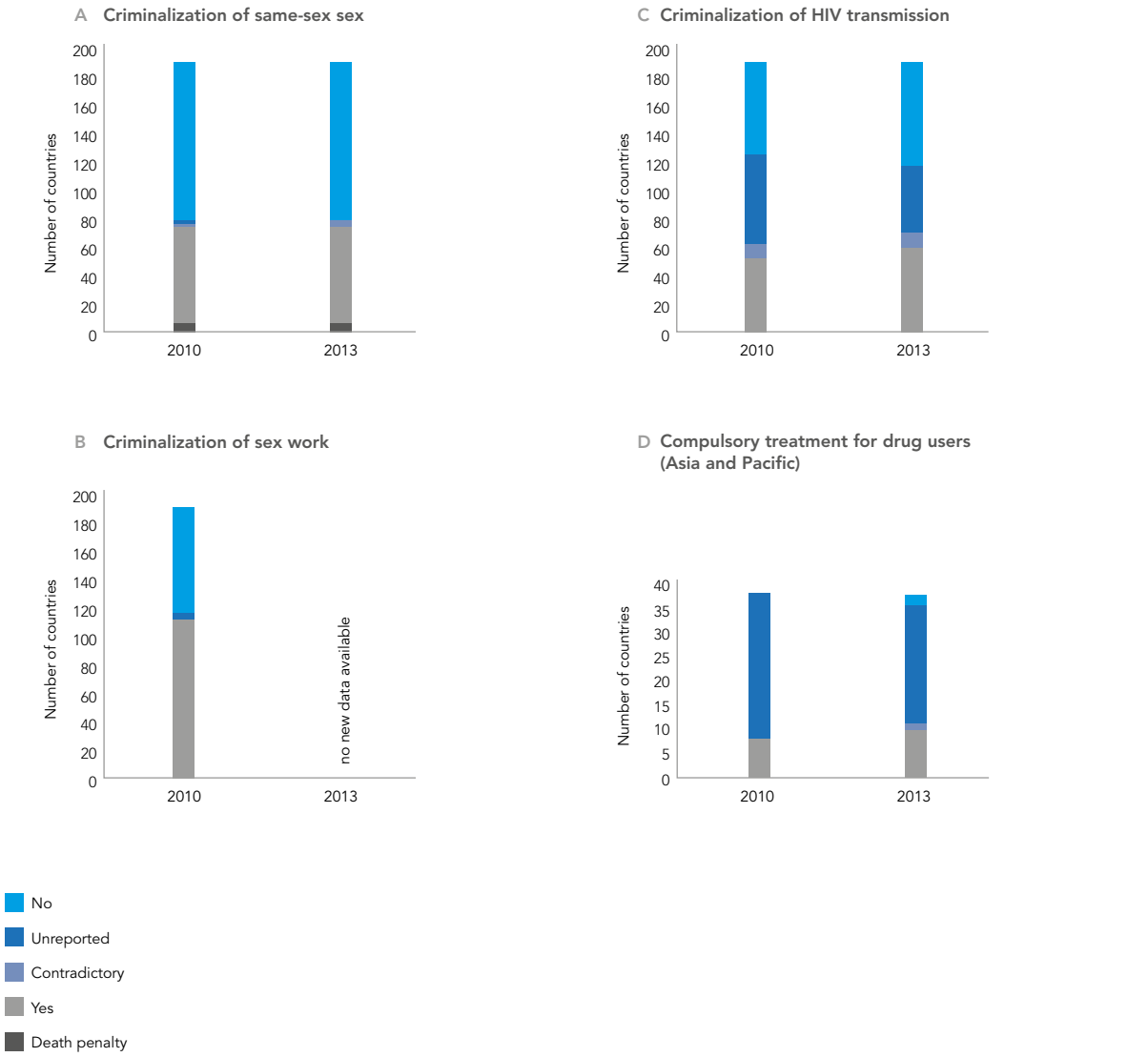
As of 2013, 63 countries have, in at least one jurisdiction, HIV-specific provisions that allow for the prosecution of HIV non-disclosure, exposure and/or transmission. In other countries, prosecutions for HIV non-disclosure, exposure or transmission have been based on general criminal law offences such as sexual assault, grievous bodily harm, criminal nuisance, manslaughter or attempted homicide.

Reviews of these laws and prosecutions for HIV non-disclosure, exposure and transmission demonstrate that they often do not reflect the best available HIV-related scientific and medical evidence regarding modes of HIV transmission and the benefit of treatment.[10] Furthermore, these laws and prosecutions often ignore generally applicable criminal law and human rights principles. For instance, prosecutions for HIV exposure have been reported against people living with HIV for acts such as spitting or biting that represent no risk of HIV transmission.[11]

Prosecutions have also been reported against people living with HIV who use condoms during sexual relations.[12] Such prosecutions are contrary to the best scientific and medical evidence and are likely to result in miscarriages of justice. Prosecution of people living with HIV for these acts is also counterproductive, in that it creates a climate of fear that undermines public health efforts to encourage people to voluntarily seek HIV prevention, testing and treatment services.

As recommended by the Global Commission on HIV and the Law, several countries have begun reviewing such laws, restricted their application or dropped them altogether (see Figure 8.3). In 2011, Fiji removed HIV-specific criminal offences for transmission or exposure from a broader HIV statute; Guyana firmly rejected a proposed HIV-specific criminal law; and at least four African countries – Congo, Guinea, Senegal and Togo – have since 2010 restricted the use of criminal laws solely to cases of intentional transmission. In order to provide support to countries in this area, UNAIDS has recently published a new guidance note: on *Ending overly-broad criminalisation of HIV non-disclosure, exposure and transmission*.[13]

FIGURE 8.3
HIV-related punitive laws, 2010–2013



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Criminalization of HIV-transmission
2010: Global Network of People Living with HIV. Global Criminalisation Scan (accessed 8 April 2013).
2013: Global Network of People Living with HIV. Global Criminalisation Scan (accessed 23 June 2013).

Compulsory treatment for drug users
2010: International Planned Parenthood Federation. Verdict on a Virus: Public Health, Human Rights and Criminal Law.
2013: UNAIDS. Punitive laws hindering the HIV response in Asia and the Pacific in June 2013.

CRIMINALIZATION OF KEY POPULATIONS

Punitive laws focused on key populations at higher risk of HIV remain common throughout the world. In 2012, non-governmental informants in 70% of countries and national governments in 60% reported the existence of laws, regulations or policies that present obstacles to effective HIV prevention, treatment, care and support for key populations and vulnerable groups.

Seventy-six of 193 countries currently criminalize same-sex relations, with some jurisdictions permitting imposition of the death penalty for convictions under such laws.[14] Seven of the 10 countries receiving the largest amounts of funding from the Global Fund, as well as more than half of the 88 countries receiving PEPFAR support, criminalize consensual sexual relations among people of the same sex.[15]

Punitive policies pertaining to drug use – including harsh penalties for possession of small amounts of drugs for personal use, criminalization of drug dependence, compulsory drug detention and bans on drug substitution therapy or needle and syringe programmes – prevent or deter many people who inject drugs from receiving the services they urgently need.[16] Compulsory drug detention regimes in some countries are so severe that a United Nations Special Rapporteur on torture or other cruel, inhuman or degrading treatment or punishment singled them out for denunciation in 2013.[17] In 2012, 12 UN system agencies jointly called for the closure of compulsory drug detention and rehabilitation centres.

Most countries have laws in place that criminalize some aspects of sex work,[18] and sex workers are often vulnerable to police harassment and mistreatment. The UN Development Programme (UNDP), the World Health Organization (WHO), the UN Population Fund (UNFPA), UNAIDS and the Network of Sex Worker Projects have called for the decriminalization of sex work and the elimination of the unjust application of laws and regulations against sex workers.

While the situation for key populations is worsening in some countries, there are some encouraging signs in others of leadership and innovation to ensure rights-based responses for key populations. For example, Malaysia is transitioning away from compulsory drug and rehabilitation centres, creating a network of non-incarceration 'cure and care' clinics that are associated with a 37% decline in injecting drug use and a 76% reduction in arrests.[19] The South African Commission on Gender Equity, a constitutionally mandated entity, has recommended the decriminalization of sex work on human rights grounds.[20] In June 2013, the US Supreme Court invalidated a US policy that required recipients of federal funds to explicitly agree with the government's policy to oppose 'prostitution'.

PROGRAMMING TO REDUCE HIV STIGMA

Anti-stigma programmes are most effective when they simultaneously address individual, organizational and public policy factors that enable stigma and discrimination.[21] Evidence indicates that anti-stigma programming reduces social isolation and improves HIV treatment adherence.[22] Given the particularly serious effects of discrimination within health care settings on people living with HIV, intensified efforts are needed to reduce stigmatizing attitudes and behaviours among health care workers.

A recent systematic review found that, over the last decade, the evidence base for effective programming to reduce stigmatizing and discriminatory attitudes has expanded substantially.[23] Notwithstanding the clear benefits of anti-stigma efforts to HIV responses, such programming remains badly under-resourced. Although the proportion of Global Fund grants that include activities addressing stigma and human rights increased from 13% in Round 8 to 62% in Round 10, a review determined that anti-stigma activities are frequently not integrated into grant work plans, budgets or performance frameworks.[24]

LOOKING AHEAD

Nearly all countries that reported results of mid-term reviews (103 of 109) identified eliminating stigma and discrimination as a national priority, with 99 having integrated this target in their national HIV strategic plans. Although national mid-term reviews reflect clear recognition of the harmful effects of stigma and discrimination on national HIV responses, 62% of countries in Eastern and Southern Africa and 50% of countries in Asia and the Pacific report that they are not on track to eliminate stigma and discrimination.

In addition to a shortage of strategic information on stigma and discrimination and insufficient enforcement of anti-discrimination provisions that are in place, national mid-term reviews also cited the inadequacy of resources for programmes to address stigma and discrimination as a major impediment to achieving zero discrimination. The majority (54%) of the 133 countries reporting HIV spending did not invest at all in human rights programmes and, out of those that did invest, only eight spent more than 1% of the total budget on these programmes.

Urgent efforts are needed to review national legal and policy frameworks to assess their adherence to human rights principles, revising or repealing laws as needed to ensure a rights-based response that provides equitable access to essential HIV programmes. Every national response needs to address stigma and discrimination and increase access to justice. Through education and awareness-raising, responses should address the causes of stigma and discrimination, including irrational fears of infection and moral judgement.

As recommended by the Global Commission on HIV and the Law, particular attention needs to focus on the removal of punitive laws regarding key populations. Legal frameworks need to be complemented by robust, sustained investment in anti-stigma programming that works to forge healthier social norms of inclusion, tolerance and non-discrimination. Much greater investment in enforcement mechanisms for anti-discrimination laws is needed, including support for legal services for people living with HIV and members of key populations, as well as programmes that educate people living with or affected by HIV regarding their rights.

Efforts to eliminate stigma and discrimination must reach beyond traditional health stakeholders and engage all arms of government, including legislative and judicial branches, as well as civil society and people living with HIV. Steps are also needed to inform and sensitize those who make the laws (parliamentarians) and those who enforce them (Ministers of Interior and Justice, police, prosecutors, judges, lawyers, prison officials and traditional and religious leaders) regarding human rights in the context of HIV.

Leadership to end discrimination

In many countries, leadership and innovation have had a positive effect on human rights-based HIV responses.

Countries across the world have taken steps to remove punitive laws that impede rights-based HIV responses. In 2012, Viet Nam passed legislation that effectively ended the practice of holding sex workers in administrative detention centres. In June 2013, the Chinese Guangdong province announced its intention to abolish restrictions that prevent people living with HIV from working as teachers. In 2012, the East African Legislative Assembly passed the HIV and AIDS Prevention and Management Act, which aims to provide a rights-based legal framework for Burundi, Kenya, Rwanda, Uganda and the United Republic of Tanzania.

Several countries have also taken steps to enhance the enforcement of rights provisions and improve access to justice for people who have experienced discrimination. In 2010, Moldova implemented a multi-faceted programme to address human rights violations against people living with HIV and key populations, providing legal aid, strategic litigation and human rights training for judges, lawyers and those who work in law enforcement. Belize, Morocco and other countries report having engaged national human rights institutions and ombudsperson offices to respond to allegations of HIV-related stigma and discrimination. Kenya has established an HIV equity tribunal to enable individuals who have experienced discrimination to obtain redress.

The inclusion of religious leaders in capacity-building around HIV and Human Rights has been strengthened by the creation in August 2013 of a new framework for dialogue between religious leaders and people living with HIV. [25] The Framework for Dialogue is a tool for increasing systematic, inclusive and sustained dialogue and collaboration between people living with HIV and religious leaders at the national level to address stigma, discrimination and other issues of concern. It is intended to be used by national networks of people living with HIV, networks of religious leaders living with HIV, religious leaders, faith-based organizations, and inter-governmental bodies and development agencies working on related issues, including UNAIDS country offices.

9. ELIMINATE HIV-RELATED RESTRICTIONS ON ENTRY, STAY AND RESIDENCE

Since 2010, 10 countries, territories or areas have eliminated restrictions on entry, stay and residence for people living with HIV. However, eliminating the remaining HIV-related restrictions on equal freedom of movement will require intensified action to remove such counterproductive and discriminatory laws that remain in force in 43 countries. This will involve the sensitization of key decision-makers in relation to how HIV is and is not transmitted, improving public attitudes about people living with HIV and about migrants, and galvanizing commitment to HIV programmes that reach people on the move.

HIV-related restrictions on entry, stay and residence are not justified by public health considerations. There is no evidence that individuals who travel pose a risk of HIV transmission and, in any event, available evidence and extensive international experience indicate that evidence- and rights-based strategies, not mandatory testing and other punitive or coercive approaches, are most effective in preventing transmission. Furthermore, HIV-related restrictions on entry, stay and residence may limit the uptake of HIV voluntary testing and hinder adherence to HIV treatment.

PROGRESS TOWARDS ELIMINATION OF HIV-RELATED RESTRICTIONS ON ENTRY, STAY AND RESIDENCE

The overwhelming majority of countries worldwide have rejected restrictions on the entry, stay and residence of people living with HIV (see Table 9.1), and there is a clear international trend towards repeal of such discriminatory laws. From 2000 to mid-2013, the number of countries, territories and areas with HIV-related travel restrictions fell by more than half – from 96 to 43 (see Figure 9.1).

From 2010 to 2012, eight countries (Armenia, China, Fiji, Namibia, the Republic of Korea, the Republic of Moldova, Ukraine and the US) repealed their restrictions. In January 2013, Mongolia lifted HIV-related restrictions on entry, stay and residence when it implemented broader legislation that also removed employment restrictions that prevented people living with HIV from taking certain jobs, including in the food industry. In mid-2013, Andorra reported the removal of its restrictions.

CONTINUING CHALLENGES POSED BY DISCRIMINATORY RESTRICTIONS

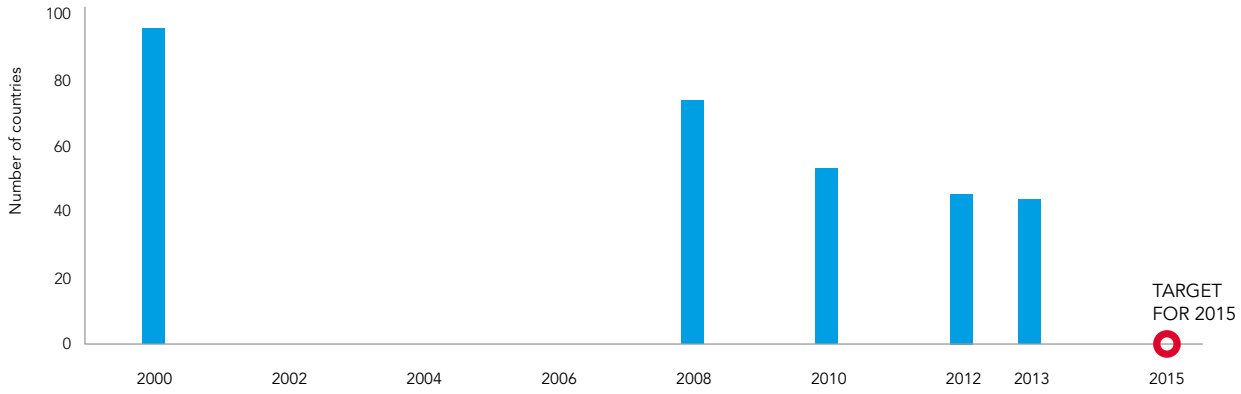
Although the trend is towards removal of restrictions on entry, stay and residence of people living with HIV, these laws persist in many countries (see Figure 9.2). Five countries maintain a blanket ban on entry by people living with HIV, five require proof of HIV-negative status for those seeking to stay for 10–90 days, and at least 19 countries authorize deportation of individuals found to be living with HIV.

TABLE. 9.1
Countries, territories and areas with restrictions on entry, stay or residence for people living with HIV as of July 2013

1. Aruba
2. Australia
3. Bahrain
4. Belarus
5. Belize
6. Brunei Darussalam
7. Comoros
8. Cuba
9. Cyprus
10. Democratic People's Republic of Korea
11. Dominican Republic
12. Egypt
13. Iraq
14. Israel
15. Jordan
16. Kuwait
17. Lebanon
18. Lithuania
19. Malaysia
20. Marshall Islands
21. Mauritius
22. New Zealand
23. Nicaragua
24. Oman
25. Papua New Guinea
26. Paraguay
27. Qatar
28. Russian Federation
29. Samoa
30. Saudi Arabia
31. Singapore
32. Slovakia
33. Solomon Islands
34. Sudan
35. Syrian Arab Republic
36. Chinese Taipei
37. Tajikistan
38. Tonga
39. Turkmenistan
40. Turks and Caicos Islands
41. United Arab Emirates
42. Uzbekistan
43. Yemen

Source: UNAIDS database on HIV-related restrictions on entry, stay and residence, updated August 2013.

FIGURE 9.1
Number of countries with restrictions on entry, stay and residence for people living with HIV, 2000–2013 and 2015 target

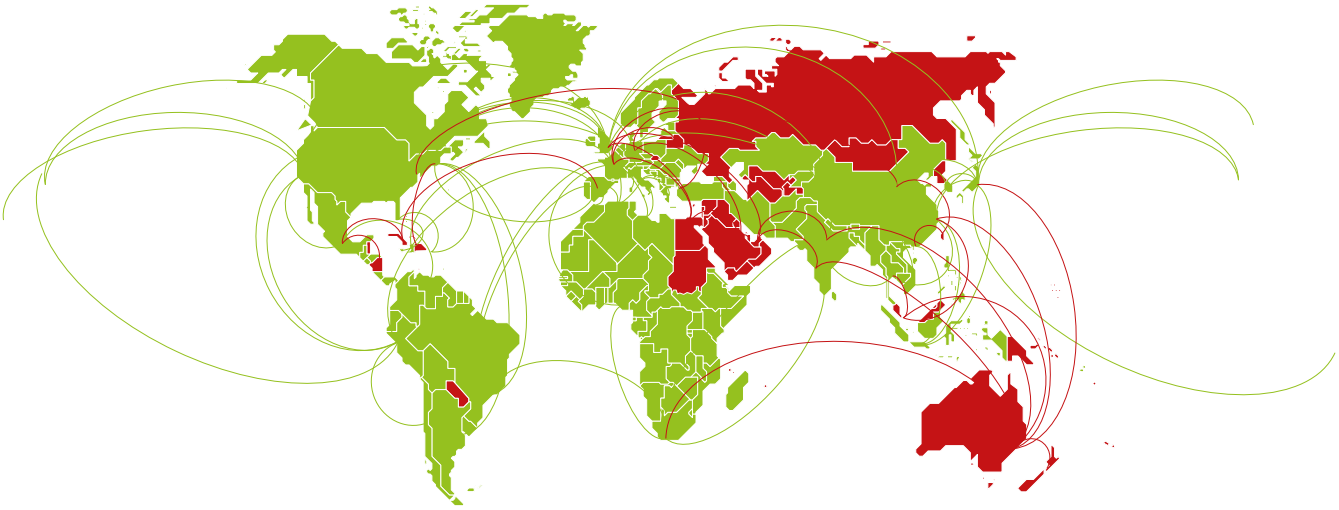


Source: for 2000, Weissner, P., Haerry, D. Entry and residency restrictions for people living with HIV. International Task Team on HIV-related Travel Restrictions. First Meeting, 24–25 February 2008, Geneva, Switzerland; for 2008, 2010, 2012 and 2013, UNAIDS database on HIV-related restrictions on entry, stay and residence.

FIGURE 9.2

Restrictions on entry, stay and residence for people living with HIV as of July 2013

Restrictions on entry, stay and residence for people living with HIV, which may involve the following: mandatory and periodic HIV testing without confidentiality, counselling or referral to services or treatment; incarceration; deportation; total bar on entry or bars on short-term or long-term stays/work; and waiver requirements.



Source: UNAIDS database on HIV-related restrictions on entry, stay and residence, updated August 2013.

These laws and the ways they are carried out violate the human rights of people living with HIV. People seeking to relocate or migrate are often tested without informed consent or counselling and are then denied visas. Others who become infected in the country of destination are found to be HIV-positive when seeking to renew their visas; they are often not told they are being tested for HIV, given their test results or counselled but instead are detained and deported summarily, sometimes without the opportunity to collect their personal effects and receive their final salary. Restrictions on entry, stay and residence based on HIV status exist in all Gulf Cooperation Council (GCC) countries, a major destination for migrant workers, in particular from Asia.

Women migrants face additional challenges as they are often more vulnerable to physical, sexual and verbal abuse. Many sexual abuse survivors, fearing societal blame and stigmatization as a result of the sexual abuse and violence they have experienced, never report incidents, thereby facing alone the negative physical and psychological consequences of rape, including the risk of being infected by HIV.[1] The trauma of abuse and violence is compounded by the stigma and financial consequences of being deported on account of their HIV-positive status.

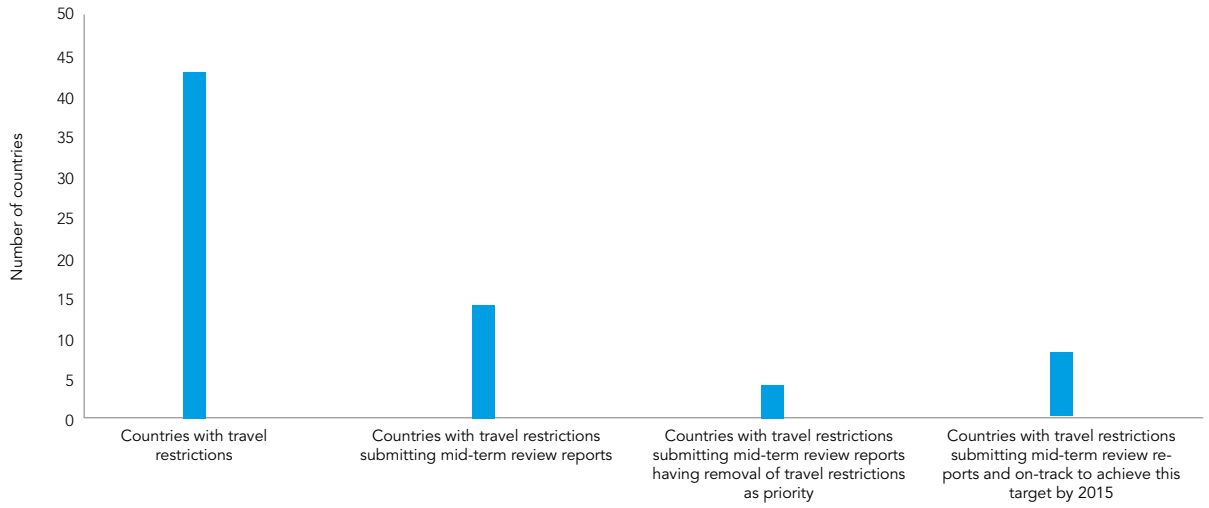
Restrictions in the Middle East and North Africa not only affect people migrating from other regions but also people living with HIV within the region. In reporting

the findings of its mid-term review, Jordan highlights the practice of national restrictions on migrants from neighbouring countries (notably Egypt, Iraq and Syria), as well as the effect of mandatory HIV screening policies on the estimated 1 million Jordanians working abroad, mostly in GCC countries.

Of the 43 countries, territories and areas worldwide that retain discriminatory HIV-related restrictions on entry, stay and residence, 15 submitted reports on their national mid-term reviews. Among these countries, only four (Egypt, Jordan, Mauritius and Paraguay) have indicated that lifting restrictions is a priority issue, and three of these countries (Egypt, Mauritius and Paraguay) indicate that they are on-track to achieve this target by 2015. Lebanon, Malaysia, Papua New Guinea, Sudan and Tajikistan have also reported that they are on-track for lifting restrictions by 2015 (see Figure 9.3).

FIGURE 9.3

Mid-term reviews, priorities and plans in countries with restrictions on entry, stay and residence for people living with HIV, 2013



Source: Mid-term review reports 2013

GROWING RECOGNITION OF THE HARM CAUSED BY HIV-RELATED RESTRICTIONS ON ENTRY, STAY AND RESIDENCE

There is increasing understanding that discriminatory restrictions on entry, stay and residence are inconsistent with the needs of an increasingly globalized business world. In November 2012, over 40 corporate chief executive officers (CEOs), representing nearly 2 million employees worldwide, cited both economic and human rights considerations in urging repeal of all HIV-related travel restrictions. Representing such prominent employers as Coca-Cola, Heineken, Johnson & Johnson, Kenya Airways, Merck, the National Basketball Association, Pfizer and Thomson Reuters, the CEOs emphasized that companies need the freedom to send their employees overseas, regardless of their HIV status, in order to succeed in a globalized, highly competitive world.

TOWARDS 2015

Reaching the goal of eliminating remaining HIV-related restrictions on entry, stay and residence will require accelerated progress, particularly in sensitizing senior officials and advancing law and regulatory reform. National coalitions or task forces – bringing together both government officials and civil society, including people living with HIV – have a potentially important role to play in building momentum for elimination of these restrictions. Efforts to educate and persuade key decision-makers should engage ministries of health, interior, migration, justice and labour.

It appears that the largest numbers of migrants affected by mandatory HIV testing, restrictions and deportation are those seeking entry, stay and residence in countries of the Middle East and North Africa region. As such, much greater regional action is required, for example through study visits from national officials in GCC countries to other countries in the Middle East and North Africa that have no restrictions, such as Morocco and Tunisia. As countries that have lifted restrictions and reported no negative effects, such learning opportunities can play a potentially important role in helping decision-makers understand that no public health rationale exists for HIV-related restrictions on entry, stay and residence.

In lieu of discriminatory policies, countries should ensure that all people on the move, citizens and non-citizens alike, should have access to essential HIV services. Countries should implement evidence- and rights-based HIV prevention, treatment, care and support programmes for people on the move, for both the formal and informal sectors.

REFORMING IMMIGRATON LEGISLATION

Papua New Guinea is among the countries reporting action towards lifting its restrictions. A review of the Migration Act and Migration Regulation, which is being led by the Department of Foreign Affairs and Immigration, has presented an opportunity for national stakeholders in the HIV response to call for the removal of HIV and AIDS from the list of diseases that are defined as representing a 'danger to the community'. As part of this review process, there have been calls for consular officials, immigration officers and medical officers to be provided with guidance that supports consistent application of immigration medical assessment criteria. All immigration health assessments should respect the HIV/AIDS Management and Prevention Act, which makes discrimination on the basis of HIV status unlawful.

9

10. STRENGTHEN HIV INTEGRATION

As sustainability has become a more prominent international priority in responding to AIDS, strides have been made towards the elimination of parallel systems and the integration of HIV in health systems and broader development efforts.* Countries are prioritizing the integration of HIV in diverse systems, with more than 90% of countries (103 out of 109) indicating that integration is a national priority. However, a smaller proportion (77 out of 109, or 70%), report that they are on track to achieve national integration commitments, with those not on track often citing donor policies and practices that use disease-specific funding channels and reporting requirements that undermine integration efforts.

Different countries have taken different approaches, reflecting in part the need for population-specific service delivery. The scope and scale of the integration of HIV services into other health services, and vice versa, vary depending on the nature of the epidemic and the needs of key populations.

ALIGNING NATIONAL PLANNING PROCESSES

At the level of national planning, many countries have taken major steps to align HIV with broader health or development plans. The overwhelming majority of countries that undertook mid-term reviews (82%) address integration in their national HIV strategic plans or equivalent documents. Many countries (45%) report that HIV has been aligned with other disease-specific planning (such as joint planning for HIV and other sexually transmitted infections (STIs)), or integrated into national health and development plans.

In their efforts to harmonize planning, countries have taken a number of approaches. Several countries (e.g. Brazil, Cameroon, Côte d'Ivoire, Fiji, Madagascar, Malawi, Mauritania, Republic of Moldova and Togo) have aligned or fully integrated strategic planning and budget cycles for HIV and health generally. Through the Sector-Wide Approach and the Pool Fund mechanism, Nepal is financing HIV interventions within a broader framework that promotes integrated approaches. Other countries, such as Ethiopia, Gabon, Georgia, Malawi, Morocco, Thailand, Senegal, South Africa and Zambia, are in the process of integrating – or have integrated to different degrees – HIV services into their national health insurance, health funds or other domestic funding schemes.

* As this cross-cutting section addresses integration of various HIV services (e.g. HIV counselling and testing, antiretroviral treatment, prevention of mother-to-child transmission and HIV/TB services) with health services and broader development, it touches on issues that are also addressed – yet from a different angle – in other sections of this report.

SERVICE INTEGRATION

As HIV responses were first being developed and scaled up, many countries established specialized service systems to address the needs of people living with HIV. While this approach was warranted in earlier stages of the response, it has become increasingly clear that maximizing the effectiveness of services and sustaining responses demands strategic integration of HIV services within health systems and other sectors.

No single approach to service integration will fit the needs of all countries. Diverse approaches to service integration have been adopted in different settings, responding in part to differences in underlying HIV service systems, health systems and needs and priorities of countries. Notwithstanding the plethora of approaches pursued, available evidence suggests that integrated approaches are beneficial, enhancing service uptake and improving coordination of care. Examples include tuberculosis and HIV services,[1,2] services to prevent mother-to-child transmission integrated with maternal and child health care,[3,4] linking HIV and chronic non-communicable diseases[5,6] and, more broadly, HIV services integrated within primary health care and overall health and community systems.[7] In addition to improving access to health services, integrated service delivery models may reduce unit costs, as reflected in lower costs of HIV testing and counselling when such services are integrated with other health services.[8]

Progress has been made in the integration of service delivery, as reflected by 2012 GARPR data and reports of countries that conducted mid-term reviews[9] (see Figure 10.1):

- **HIV and tuberculosis.** Among 105 countries reporting, 56 (53%) have taken active steps towards either fully integrating HIV/TB services or strengthening joint service provision. The degree of HIV/TB integration varied considerably, ranging from fully integrated service delivery to the addition of specific services (e.g. tuberculosis diagnostic services in HIV clinics). Several countries, including Armenia, Botswana, Comoros, Democratic Republic of the Congo, Ethiopia, Eritrea, Namibia, North Sudan and South Africa, identified the need to further integrate HIV and tuberculosis services in order to scale-up timely diagnosis and treatment of HIV/TB co-infections.

- **Services to prevent mother-to-child transmission and support maternal and child health.** Of the 118 countries reporting pertinent data, 70% said they had integrated HIV testing, counselling and services within antenatal care and maternal and child health services to prevent mother-to-child transmission. Forty-three countries report having linkages or integrated service delivery between services to prevent mother-to-child HIV transmission and broader maternal and child health services. Country examples include Gambia, Guinea-Bissau, Ethiopia and Viet Nam (see box below).

- **HIV and services for STIs and sexual and reproductive health.** Two-thirds of countries report having integrated HIV in sexual and reproductive health services, with more than 45 countries having conducted the rapid assessment for sexual and reproductive health and HIV linkages. For example, Nepal has established a coordination mechanism to integrate reproductive health services within HIV programmes, with coordinated provider training

programmes for HIV and sexual and reproductive health. In Morocco, the integration of HIV into public health services expanded the number of people receiving HIV counselling and testing, from 46 000 in 2010 to 222 620 people tested in 2012, while coverage of services for HIV-positive pregnant women to prevent mother-to-child HIV transmission rose from 29% in 2010 to 48% in 2012. Several countries reported that national leadership is key to effective integration. Some donors have separate funding streams for HIV and STI services, which may hinder effective integration.

- **HIV and non-communicable diseases.** HIV service scale-up has provided impetus for the development of broader chronic care systems in many countries where services for chronic diseases have historically been scarce. Among 115 countries submitting pertinent information, 27 (23%) report having integrated HIV counselling, testing and antiretroviral treatment with services for chronic non-communicable diseases. Among countries that have taken steps towards such service integration, the extent and depth of integration varies. Some have started realizing positive synergies and spill-over effects for management of HIV and other chronic diseases.

- **HIV and primary care and overall health and community systems.** Fifty-five per cent of countries report having integrated HIV counselling and testing in general outpatient care, with 32% of countries integrating antiretroviral treatment in such settings. Primary health care and antenatal settings are providing integrated services for reproductive health, STIs, tuberculosis and HIV in Armenia; the Bahamas have integrated HIV and STI services in primary care; stand-alone antiretroviral clinics in Namibia are in the process of being integrated within primary health care. Brazil is providing integrated HIV and primary care services through the country's public, decentralized health service. Additional efforts are needed to strengthen community systems and promote further decentralization of HIV service provision.

Although integrated service delivery models have the potential to generate benefits in all regions, what works in one country or community may not be effective in another. As many key populations avoid mainstream service systems, especially in settings where stigma and discrimination are rife or where their status or behaviours are criminalized, special service delivery approaches are needed.[10]

FIGURE 10.1
Integration of HIV in health service delivery

HIV and tuberculosis services

More than 90% of countries have reported a high number of services offering integrated HIV counselling and testing and tuberculosis services (70 countries, 92%), while three countries (4%) had started the process, according to their 2013 Global AIDS Progress Reports.

56 countries (53%) have gone further in integrating services and they reported a high number of services jointly addressing HIV counselling and testing, antiretroviral therapy and tuberculosis services.

Sexual and reproductive health services

79 countries (67%) reported that they had are many facilities offering HIV counselling and testing, integrated with sexual and reproductive health services.

34 countries (29%) reported that few facilities had integrated HIV counselling and testing with sexual and reproductive health services.

Ending mother-to-child HIV transmission, and supporting maternal and child health

83 countries (70%) reported a high number of facilities integrating HIV counselling and testing with antenatal care, maternal and child healthcare and services to prevent mother-to-child transmission.

However, 31 countries (26%) reported that only a few services provided HIV counselling and testing and mother-to-child transmission prevention services integrated with antenatal care or maternal and child health.

HIV integrated in primary health care

71 countries (55%) reported a high number of HIV counselling and testing services integrated with general outpatient care in health facilities; 45 (35%) reported that only few services were providing joint services.

37 countries (32%) had gone further in integrating services and reported a high number of facilities offering integrated HIV counselling and testing, antiretroviral therapy and general outpatient care; yet 51 countries (44%) reported that only a few facilities offered integrated services.

HIV and non-communicable diseases

33 countries (28%) reported that a high number of facilities were integrating services for HIV counselling and testing with those for chronic non-communicable diseases, while 45 countries (38%) reported that few of these services were integrated.

27 countries (23%) reported that there are many facilities integrating HIV counselling and testing with antiretroviral therapy and chronic non-communicable disease services, yet 47 countries (41%) reported few facilities were integrating these services.

Source: GARPR 2013

INTEGRATION OF HIV WITHIN NON-HEALTH SECTORS

Critical enablers and development synergies ensure the efficacy, equity and roll-out of basic HIV programme activities. By integrating HIV responses not only within health sectors but also within non-health sectors, the sustainability of a robust response to HIV is enhanced.

Use of social protection initiatives to promote HIV prevention is one example of how HIV responses may be effectively integrated within non-health development initiatives. Likewise, as food insecurity has been found to inhibit effective HIV prevention and treatment,[11] HIV should be integrated within nutrition, feeding and other programmes to increase food security. Several studies have generated promising findings regarding the potential impact of education in general[12] and cash transfers in particular on young people's sexual behaviour and HIV risks.[13,14,15]

TOWARDS 2015

There is strong official support among countries for the integration of HIV with broader health and development efforts. Of the countries that reported results of mid-term reviews and identified HIV integration as a national priority, 94 have included integration commitments in their national HIV strategic plans.

Although considerable gains have been made in taking AIDS out of isolation, countries are at different stages of integrating the HIV response within the broader health sector and other development sectors.

National mid-term reviews identified numerous challenges, including the need for enhanced leadership and commitment to eliminating parallel structures, moving towards service integration and improving cross-sectoral collaboration. Several countries reported that external funding should move from funding single diseases to funding integrated health services. Countries reported that to effectively improve their health systems requires investment in delivery of integrated services, such as physical infrastructure, new training requirements, new management approaches or integrated reporting structures for monitoring and evaluation. Systems for monitoring the effectiveness of integrated service delivery models should be improved and more detailed evidence provided. Such data can then be used to develop meaningful indicators with which impact can be measured.

BEYOND 2015

Debates regarding the post-2015 agenda articulate a global health agenda that focuses on health rather than disease. As the previous discussion reveals, the HIV response is already recognizing and acting on the need to integrate elements of the HIV response within the health system. The high priority accorded to HIV, however, must be maintained. Those aspects of the response that have made it effective must be protected and embedded in future health and development goals. Some aspects of the HIV response do, however, require careful consideration regarding whether integration of services will add value. Key populations living with HIV may not

necessarily access public health care services. Service delivery models need to be tailored to the needs of these groups, for instance through the provision of bundled outreach services or other models, and to involve affected communities.[16]

As a pathfinder in the provision of person-centred and rights-based services, the HIV response has many lessons to share with the emerging health and development paradigm.

Eliminating parallel systems and usefully integrating programmes and services require three different sets of action:

- **The national-level policy and planning perspective.** Joint budgeting is needed for HIV and other disease programmes or overall health sectors, and health planning should be informed by and linked to other sectoral planning (e.g. finance, education, labour, human rights, gender). HIV monitoring should be embedded in broader health information systems.
- **The management perspective.** Donor approaches should support, rather than undermine, integrated planning and programme management, while governance structures should be strengthened and adapted to support integration. Human resources for health will need to be rigorously analysed to ensure sufficient numbers of workers and the right distribution of skills to deliver integrated health care.
- **The point of service delivery perspective.** At the point of delivery, HIV services should be integrated with health and other services where appropriate. Quality of service delivery should be closely monitored and improved where necessary.

As the body of evidence relating to country experiences expands, capturing both positive and negative outcomes will be essential to providing clearer guidance and indicators on how best to approach integration of the HIV response within wider health and development efforts and identifying which elements are key to successful outcomes.

NATIONAL LEADERSHIP AND INNOVATION

Integrating services for the prevention of mother-to-child HIV transmission within maternal and child health services.

Throughout the world, countries are pursuing innovative approaches to the integration of prevention of mother-to-child HIV transmission with broader maternal and child health services. These approaches, in turn, are improving health outcomes for women and children.

As a result of an integrated approach to service delivery for women and children, Gambia has exceeded its target for the number of babies born to women living with HIV who receive cotrimoxazole within the first two months of life (target: 944; current: 1070 (113%)). Uptake of prophylaxis has been aided by its alignment with the DPT1 immunization schedule delivered through integrated infant welfare clinics.

Guinea-Bissau has integrated HIV testing and counselling within sexual and reproductive health services. Prevention of mother-to-child HIV transmission is an integral component of antenatal care, integrated within almost all public sector antenatal clinics, with systematic screening and an acceptance rate for HIV testing of 85%. Through scale-up of services integrated in health facilities and antenatal clinics, the proportion of HIV-positive pregnant women receiving antiretroviral therapy increased from 32% in 2010 to 50% in 2012.

Ethiopia has steadily integrated a wide range of HIV-related services – including HIV testing and counselling, antiretroviral therapy and prevention of mother-to-child transmission – within the reproductive, maternal, newborn and child health platform. Despite these steps, coverage for services to prevent new infections among children remains below 50%, underscoring the need for continued efforts to generate robust demand for services and improve access to and quality of services. It is especially important that prevention of new HIV infections among children be fully integrated within maternal and child health programmes and reproductive health services at diverse points of delivery.

In 2012, Viet Nam launched a pilot model to integrate services for prevention of mother-to-child HIV transmission, sexually transmitted infections and sexual and reproductive health in two provinces with low HIV prevalence. For the provision of integrated health services, including HIV counselling and testing, the model uses midwives as the first point of contact for pregnant women. Viet Nam plans to expand the model to other regions following regional needs assessment of sexual and reproductive health and HIV service needs, human resource capacity and infrastructure. To further support service integration, management of prevention of mother-to-child transmission is being transferred from the Viet Nam Administration for AIDS Control to the Maternal and Child Health Department within the Ministry of Health.

From a regional perspective, in Eastern and Southern Africa, the regional Joint Linkages SRH/HIV Project aims to integrate HIV and sexual and reproductive health services at the policy development, service delivery and knowledge generation levels. Funded by the European Union, the project has undertaken rapid assessments and baseline surveys in various countries, mapped HIV and sexual and reproductive health services, and implemented a set of integrated interventions. The project has been aligned with other regional initiatives, including the Maputo Plan of Action and the Southern African Development Community strategies for HIV and sexual and reproductive health.

10

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ANNEXES

he data presented in the following tables were compiled by UNAIDS through two ources:

Global AIDS Response Progress Reporting (GARPR), an online tool in which countries submit their most recent data on global indicators, and

Modelled HIV estimates, created in standard modelling software by national epidemiological teams.

n their GARPR reports, countries provided extensive information on progress wards core HIV indicators. With the exception of modest adaptations to two ndicators, core indicators remained the same for the latest round of reporting, ermitting identification of trends at global, regional and country levels. While ne full National Commitments and Policies Instrument, an extensive survey of overnmental and non-governmental informants regarding HIV-related policies, uman rights issues and service provision, was not included in 2013 GARPR, short questionnaire about policies was included. A full description of the ndicators used in GARPR and the process of compiling those data can be found at **ttp://goo.gl/KYeUPt**.

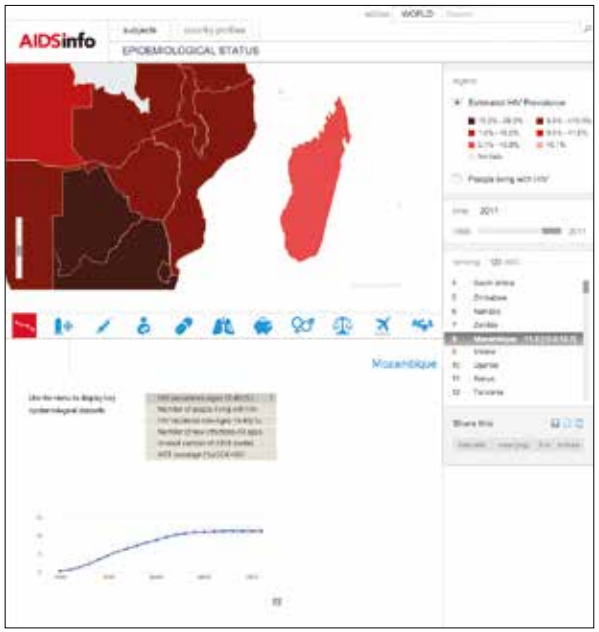
he modelled HIV estimates are identified as estimates in the following tables. he estimates are calculated using the Spectrum computer package. National files e developed in countries and submitted to UNAIDS for review. The results are pproved by national representatives. For countries that do not create modelled stimates, draft files are created based on published or otherwise available nformation and the estimates are not presented in the tables. Regional totals e calculated using all files and are not limited to country-submitted files. The stimates are also limited to ranges if the country has very limited data to inform ne model. Estimates for children in concentrated epidemics are imprecise and thus xcluded from the tables.

or more information on the Spectrum computer package used for the estimates lease visit **www.futuresinstitute.org**. For more information on the assumptions nd process of developing the HIV-related parameters used in Spectrum please visit **ww.epidem.org**.

The analysis of the data set in the Global Report 2013 is based on the data portrayed in this data annex. The data is also made available in different visual formats on **http://aidsinfo.unaids.org**. This allows the data to be used for effective communication in reaching the targets at global and country levels.

For those interested in further analysis and disaggregation of data over longer time periods, the full data-set is made available through **www.aidsinfoonline.org**.

http://aidsinfo.unaids.org



www.aidsinfoonli

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
1.2	1.5	1.0	0.9	1.1
3.4	3.5	3.3	3.2	3.5
0.6	0.9	0.9	0.8	1.1
<0.1	<0.1	<0.1	<0.1	0.1
1.1	1.5	0.7	0.6	0.8
2.6	3.2	2.1	1.9	2.3
2.0	2.7	1.7	1.4	2.0
1.1	1.4	1.6	1.4	1.7
<0.1	0.1	0.1	0.1	0.1
...	...	<0.1	<0.1	0.1
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
0.4	0.6	0.7	0.6	0.9
<0.1	0.2	0.2	0.1	0.3
<0.1	0.1	0.2	0.1	0.2
0.1	0.2	0.4	0.4	0.5
<0.1	<0.1	0.3	0.2	0.4
...	...	...	...	...
<0.1	<0.1	0.3	0.2	0.4
0.4	0.6	0.7	0.6	0.9
...	...	...	...	...
<0.1	0.1	0.3	0.2	0.6
0.7	1.0	0.9	0.7	1.0
0.2	0.3	0.1	0.1	0.2
0.4	0.5	0.4	0.3	0.5
0.3	0.5	0.4	0.3	0.5

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	0.4	0.3	0.6	0.3
Brazil	...	0.4	0.5	...
Chile	0.4	0.2	0.6	0.4
Colombia	0.6	0.5	0.8	0.5
Costa Rica	0.2	0.2	0.2	0.3
Ecuador	0.6	0.3	0.9	0.6
El Salvador	0.8	0.6	1.2	0.6
Guatemala	0.8	0.5	1.3	0.7
Guyana	0.7	0.4	1.1	1.3
Honduras	1.2	1.0	1.5	0.5
Mexico	0.3	0.3	0.4	0.2
Nicaragua	<0.1	<0.1	<0.1	0.3
Panama	1.2	1.0	1.5	0.7
Paraguay	0.1	<0.1	0.4	0.3
Peru	0.6	0.4	0.8	0.4
Suriname	1.2	1.0	1.4	1.1
Uruguay	0.5	0.3	0.7	0.7
Venezuela (Bolivarian Republic of)	0.6	0.4	0.9	0.6
Middle East and North Africa	0.1	0.1	0.1	0.1
Algeria	...	...	...	...
Djibouti	2.3	1.8	2.8	1.2
Egypt	<0.1	<0.1	<0.1	<0.1
Iran (Islamic Republic of)	<0.1	<0.1	<0.1	0.2
Lebanon	...	...	...	...
Morocco	<0.1	<0.1	<0.1	0.1
Oman	...	...	...	...
Somalia	0.7	0.4	1.1	0.5

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	<0.1	0.1	<0.1	0.3
0.4	**0.7**	**0.5**	**0.4**	**0.8**
...	...	...	...	...
...	...	...	...	...
0.2	**0.3**	**0.2**	**0.2**	**0.3**
...	...	...	...	...
<0.1	0.2	0.2	0.2	0.2
...	...	...	...	...
0.5	1.0	0.5	0.4	0.7
0.3	**0.4**	**0.3**	**0.2**	**0.4**
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	0.1	0.2	0.1	0.6
1.1	2.6	0.8	0.5	1.5
0.3	0.5	0.3	0.2	0.3
<0.1	0.2	0.4	0.3	0.7
<0.1	0.2	0.3	0.2	0.3
0.3	0.6	0.4	0.3	0.6
<0.1	<0.1	<0.1	<0.1	<0.1
0.7	0.9	0.6	0.5	0.6
0.4	0.5	0.3	0.2	0.4
<0.1	<0.1	<0.1	<0.1	0.2
<0.1	<0.1	<0.1	<0.1	<0.1
...	...	...	...	...
<0.1	<0.1	<0.1	<0.1	<0.1
1.7	1.9	1.1	1.0	1.2
<0.1	0.6	0.4	0.1	0.8

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	**5.8**	**5.5**	**6.3**	**4.7**
Angola	1.8	1.3	2.6	2.3
Benin	1.6	1.4	1.8	1.1
Botswana	28.1	26.7	29.6	23.0
Burkina Faso	2.2	1.9	2.6	1.0
Burundi	2.9	2.4	3.4	1.3
Cameroon	5.2	4.9	5.6	4.5
Cape Verde	0.5	0.4	0.6	0.2
Central African Republic	...	...	...	...
Chad	3.8	3.3	4.4	2.7
Comoros	...	...	...	...
Congo	4.7	4.3	5.3	2.8
Côte d'Ivoire	6.4	5.9	7.2	3.2
Democratic Republic of the Congo	1.5	1.4	1.7	1.1
Equatorial Guinea	3.6	2.0	6.6	6.2
Eritrea	2.0	1.5	2.7	0.7
Ethiopia	3.6	3.3	3.9	1.3
Gabon	6.1	5.4	6.9	4.0
Gambia	1.0	0.7	1.3	1.3
Ghana	2.3	2.0	2.6	1.4
Guinea	1.3	1.1	1.5	1.7
Guinea-Bissau	2.8	2.1	3.8	3.9
Kenya	8.5	8.2	8.8	6.1
Lesotho	23.4	21.9	24.9	23.1
Liberia	2.3	1.9	2.6	0.9
Madagascar	0.7	0.5	0.8	0.5
Malawi	15.5	14.8	16.4	10.8
Mali	1.6	1.3	2.0	0.9

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
0.9	1.0	1.2	1.2	1.3
8.1	10.2	11.1	9.9	12.9
13.0	17.1	13.3	11.4	15.2
0.9	1.2	0.5	0.4	0.6
3.0	4.0	3.1	2.8	3.5
4.0	4.9	2.9	2.6	3.2
0.7	1.5	1.0	0.8	1.4
0.4	0.6	0.5	0.4	0.6
0.7	1.4	1.5	1.0	2.1
14.7	15.8	17.9	17.3	18.4
1.4	5.2	2.7	1.8	4.0
23.2	26.6	26.5	24.6	28.3
3.9	5.4	2.9	2.5	3.5
5.9	7.8	7.2	6.4	8.4
6.7	8.3	5.1	4.6	5.7
14.2	16.0	12.7	11.9	13.7
23.0	25.6	14.7	13.8	15.6
0.2	**0.2**	**0.2**	**0.2**	**0.2**
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	...	...	...
Iceland	...	...	...	...
Ireland	...	...	...	...
Israel	...	...	...	...
Italy	...	...	...	...
Latvia	...	...	...	...
Lithuania	...	...	...	...
Luxembourg	...	...	...	...
Malta	...	...	...	...
Netherlands	...	...	...	...
Norway	...	...	...	...
Poland	...	...	...	...
Portugal	...	...	...	...
Romania	...	...	...	...
Serbia	...	...	...	...
Slovakia	...	...	...	...
Slovenia	...	...	...	...
Spain	...	...	...	...
Sweden	...	...	...	...
Switzerland	...	...	...	...
Turkey	...	...	...	...
United Kingdom of Great Britain and Northern Ireland	...	...	...	...
GLOBAL	**0.8**	**0.7**	**0.9**	**0.8**

[1] Estimates for China and India are based on 2011 national estimates.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
250 000	310 000	250 000	220 000	280 000
5 800	6 100	7 000	6 700	7 400
<1 000	1 400	1 500	1 300	1 800
2 100	4 000	4 700	3 400	8 200
55 000	74 000	45 000	39 000	52 000
140 000	180 000	150 000	130 000	160 000
28 000	40 000	28 000	23 000	34 000
9 200	12 000	14 000	13 000	15 000
270 000	530 000	880 000	650 000	1 200 000
...	...	780 000	620 000	940 000
...	...	...	...	...
5 400	8 000	...	7 100	11 000
...	...	...	...	...
5 500	8 900	...	12 000	20 000
700 000	1 100 000	1 300 000	1 000 000	1 700 000
<1 000	3 500	3 500	2 300	5 300
2 500	5 800	10 000	8 000	14 000
5 700	9 600	23 000	21 000	26 000
1 100	2 200	6 600	5 200	9 500
...	...	...	...	...
<1 000	1 800	8 700	6 000	13 000
11 000	18 000	19 000	15 000	23 000
...	...	...	...	...
<500	4 000	12 000	6 900	24 000
200 000	260 000	230 000	190 000	270 000
23 000	51 000	30 000	23 000	40 000
1 100 000	1 500 000	1 500 000	1 200 000	1 900 000
59 000	97 000	98 000	80 000	120 000

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	18 000	13 000	27 000	1
Brazil	...	430 000	520 000	
Chile	33 000	16 000	50 000	3
Colombia	140 000	100 000	180 000	15
Costa Rica	5 200	4 900	5 500	
Ecuador	40 000	22 000	60 000	5
El Salvador	26 000	19 000	38 000	2
Guatemala	49 000	31 000	76 000	5
Guyana	3 300	2 000	5 200	
Honduras	43 000	36 000	52 000	2
Mexico	190 000	160 000	230 000	17
Nicaragua	1 300	<1 000	2 500	
Panama	21 000	17 000	26 000	1
Paraguay	3 600	2 300	11 000	1
Peru	94 000	67 000	130 000	7
Suriname	3 500	2 800	4 100	
Uruguay	8 400	5 800	12 000	1
Venezuela (Bolivarian Republic of)	84 000	56 000	130 000	11
Middle East and North Africa	150 000	100 000	230 000	26
Algeria	...	...	...	
Djibouti	9 700	7 600	12 000	
Egypt	2 000	1 300	3 400	
Iran (Islamic Republic of)	15 000	7 000	29 000	7
Lebanon	...	...	...	
Morocco	8 700	6 200	11 000	3
Oman	...	<500	1 300	
Somalia	29 000	16 000	44 000	3

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<500	1 100	2 300	1 400	3 800
2 000	7 500	19 000	8 900	47 000
800 000	1 200 000	1 300 000	980 000	1 900 000
36 000	51 000	...	59 000	85 000
750 000	1 200 000	...	920 000	1 800 000
30 000	45 000	51 000	43 000	59 000
10 000	15 000	...	18 000	27 000
<500	<1 000	<1 000	<1 000	1 200
1 300	1 900	...	2 200	3 600
15 000	32 000	25 000	20 000	31 000
2 900 000	4 600 000	3 900 000	2 900 000	5 200 000
<1 000	5 300	4 300	1 600	14 000
<500	6 900	8 000	3 100	82 000
<500	<500	1 100	<1 000	2 700
77 000	190 000	76 000	59 000	120 000
1 900 000	2 800 000	2 100 000	1 700 000	2 600 000
<100	260 000	610 000	390 000	940 000
2 500	6 600	12 000	10 000	13 000
38 000	80 000	82 000	60 000	110 000
<100	<100	<100	<100	<100
190 000	250 000	200 000	170 000	220 000
41 000	63 000	49 000	39 000	65 000
6 500	19 000	87 000	50 000	160 000
3 200	11 000	15 000	11 000	23 000
2 200	3 900	...	3 000	4 700
1 200	3 500	3 000	2 000	5 000
610 000	700 000	440 000	400 000	480 000
41 000	320 000	260 000	70 000	490 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	21 700 000	20 200 000	23 500 000	25 000
Angola	130 000	96 000	190 000	250
Benin	62 000	55 000	70 000	72
Botswana	300 000	280 000	320 000	340
Burkina Faso	180 000	160 000	210 000	110
Burundi	130 000	110 000	150 000	89
Cameroon	480 000	450 000	530 000	600
Cape Verde	1 300	<1 000	1 400	<1
Central African Republic	...	...	...	
Chad	190 000	160 000	220 000	210
Comoros	...	...	...	
Congo	92 000	84 000	100 000	74
Côte d'Ivoire	630 000	570 000	710 000	450
Democratic Republic of the Congo	440 000	400 000	490 000	480
Equatorial Guinea	12 000	6 700	22 000	31
Eritrea	30 000	21 000	41 000	18
Ethiopia	1 300 000	1 200 000	1 400 000	760
Gabon	42 000	37 000	48 000	41
Gambia	7 200	5 400	9 600	14
Ghana	270 000	230 000	310 000	240
Guinea	64 000	52 000	77 000	120
Guinea-Bissau	21 000	15 000	28 000	41
Kenya	1 600 000	1 500 000	1 700 000	1 600
Lesotho	280 000	260 000	300 000	360
Liberia	33 000	28 000	39 000	22
Madagascar	55 000	44 000	67 000	59
Malawi	1 100 000	1 000 000	1 100 000	1 100
Mali	110 000	87 000	140 000	100

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
6 700	8 200	11 000	9 600	12 000
760 000	970 000	1 600 000	1 400 000	1 800 000
150 000	200 000	220 000	190 000	250 000
48 000	69 000	46 000	39 000	56 000
2 200 000	3 000 000	3 400 000	3 100 000	3 800 000
220 000	270 000	210 000	190 000	230 000
<1 000	1 300	1 400	1 000	1 900
23 000	32 000	43 000	35 000	52 000
19 000	37 000	58 000	42 000	82 000
4 100 000	4 700 000	6 100 000	5 800 000	6 400 000
55 000	210 000	150 000	100 000	230 000
140 000	160 000	210 000	200 000	230 000
110 000	160 000	130 000	110 000	150 000
910 000	1 200 000	1 500 000	1 400 000	1 800 000
1 400 000	1 700 000	1 500 000	1 300 000	1 600 000
880 000	1 000 000	1 100 000	1 000 000	1 200 000
1 700 000	2 000 000	1 400 000	1 300 000	1 500 000
550 000	620 000	860 000	800 000	930 000
3 800	7 000	...	13 000	25 000
6 600	11 000	...	16 000	26 000
1 100	2 200	...	2 400	5 800
<500	<1 000	...	<1 000	1 600
1 100	1 400	...	1 800	2 300
3 000	4 000	...	5 500	7 500
3 500	5 300	...	7 200	11 000
1 500	2 000	...	2 600	3 600
98 000	130 000	...	120 000	180 000
36 000	44 000	...	62 000	78 000

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	2 000	3 200	
Iceland	...	<500	<500	
Ireland	...	3 600	6 100	
Israel	...	4 200	7 300	
Italy	...	84 000	120 000	
Latvia	...	3 500	6 100	
Lithuania	...	<1 000	<1 000	
Luxembourg	...	<500	<1 000	
Malta	...	<200	<500	
Netherlands	...	14 000	24 000	
Norway	...	2 400	4 300	
Poland	...	16 000	29 000	
Portugal	...	26 000	45 000	
Romania	...	12 000	20 000	
Serbia	...	<500	3 800	
Slovakia	...	<200	<500	
Slovenia	...	<200	<500	
Spain	...	110 000	140 000	
Sweden	...	5 400	10 000	
Switzerland	...	11 000	17 000	
Turkey	...	1 300	2 300	
United Kingdom of Great Britain and Northern Ireland	...	37 000	56 000	
GLOBAL	30 000 000	27 200 000	33 100 000	35 300

[1] Estimates for China and India are based on 2011 national estimates.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
230 000	280 000	230 000	210 000	260 000
5 700	6 000	6 900	6 600	7 300
<1 000	1 400	1 500	1 300	1 700
2 100	4 000	4 700	3 300	8 100
53 000	70 000	42 000	37 000	49 000
120 000	160 000	130 000	120 000	150 000
28 000	39 000	28 000	23 000	33 000
9 000	11 000	14 000	13 000	15 000
270 000	520 000	880 000	650 000	1 200 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
690 000	1 000 000	1 300 000	990 000	1 600 000
<1 000	3 500	3 500	2 300	5 300
2 500	5 800	10 000	7 900	14 000
5 700	9 500	23 000	21 000	25 000
1 100	2 200	6 600	5 200	9 400
...	...	...	...	...
<1 000	1 700	8 700	5 900	13 000
11 000	18 000	19 000	15 000	23 000
...	...	...	...	...
<500	3 800	11 000	6 500	23 000
200 000	260 000	230 000	190 000	260 000
22 000	50 000	27 000	21 000	38 000
1 100 000	1 500 000	1 400 000	1 200 000	1 800 000
58 000	96 000	95 000	77 000	110 000

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	18 000	13 000	26 000	15
Brazil	...	420 000	510 000	
Chile	33 000	16 000	49 000	39
Colombia	140 000	100 000	180 000	140
Costa Rica	5 000	4 700	5 300	9
Ecuador	39 000	21 000	58 000	51
El Salvador	25 000	18 000	36 000	24
Guatemala	46 000	29 000	72 000	53
Guyana	3 100	1 900	4 900	7
Honduras	39 000	32 000	47 000	23
Mexico	190 000	150 000	230 000	170
Nicaragua	1 300	<1 000	2 400	9
Panama	20 000	16 000	25 000	16
Paraguay	3 500	2 200	11 000	13
Peru	89 000	64 000	120 000	72
Suriname	3 300	2 700	3 900	3
Uruguay	8 300	5 800	12 000	13
Venezuela (Bolivarian Republic of)	80 000	53 000	120 000	100
Middle East and North Africa	130 000	93 000	210 000	250
Algeria	...	...	...	
Djibouti	9 200	7 200	11 000	6
Egypt	1 900	1 200	3 300	6
Iran (Islamic Republic of)	15 000	7 000	29 000	70
Lebanon	...	...	...	
Morocco	8 300	5 900	11 000	29
Oman	...	...	...	
Somalia	25 000	15 000	40 000	26

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<500	1 100	2 300	1 300	3 700
1 900	7 200	18 000	8 300	44 000
800 000	1 200 000	1 300 000	980 000	1 900 000
...	...	...	...	...
...	...	...	...	...
29 000	43 000	48 000	40 000	55 000
...	...	...	...	...
<500	<1 000	<1 000	<1 000	1 100
...	...	...	...	...
14 000	29 000	22 000	18 000	28 000
2 800 000	4 500 000	3 700 000	2 700 000	4 900 000
<1 000	5 000	4 000	1 500	13 000
<500	6 700	7 600	3 000	80 000
<500	<500	1 000	<500	2 600
74 000	180 000	71 000	51 000	130 000
1 900 000	2 700 000	1 900 000	1 600 000	2 400 000
<100	260 000	590 000	380 000	910 000
2 400	6 000	11 000	9 300	12 000
38 000	79 000	81 000	59 000	110 000
<100	<100	<100	<100	<100
190 000	250 000	190 000	160 000	210 000
40 000	61 000	45 000	36 000	60 000
6 400	19 000	85 000	48 000	160 000
3 000	10 000	14 000	11 000	22 000
...	...	...	...	...
1 100	3 500	2 900	1 900	4 800
610 000	690 000	430 000	390 000	470 000
41 000	310 000	250 000	68 000	480 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	19 400 000	18 000 000	21 000 000	22 100
Angola	110 000	85 000	170 000	220
Benin	56 000	49 000	63 000	62
Botswana	290 000	270 000	310 000	330
Burkina Faso	140 000	120 000	160 000	94
Burundi	100 000	86 000	120 000	72
Cameroon	450 000	410 000	490 000	540
Cape Verde	1 100	<1 000	1 200	<1
Central African Republic	...	...	...	
Chad	170 000	140 000	190 000	180
Comoros	...	...	...	
Congo	77 000	70 000	86 000	61
Côte d'Ivoire	570 000	510 000	650 000	390
Democratic Republic of the Congo	370 000	340 000	410 000	390
Equatorial Guinea	11 000	6 000	20 000	28
Eritrea	26 000	19 000	35 000	15
Ethiopia	1 100 000	1 000 000	1 200 000	590
Gabon	40 000	35 000	45 000	37
Gambia	6 600	4 900	8 800	13
Ghana	240 000	210 000	280 000	210
Guinea	58 000	48 000	71 000	100
Guinea-Bissau	19 000	14 000	26 000	35
Kenya	1 400 000	1 300 000	1 500 000	1 400
Lesotho	250 000	240 000	280 000	320
Liberia	31 000	26 000	36 000	18
Madagascar	48 000	39 000	59 000	50
Malawi	910 000	860 000	980 000	950
Mali	94 000	77 000	120 000	84

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
6 700	8 100	10 000	9 500	12 000
700 000	900 000	1 400 000	1 200 000	1 600 000
140 000	180 000	200 000	180 000	230 000
43 000	62 000	36 000	30 000	45 000
2 000 000	2 800 000	3 000 000	2 700 000	3 300 000
180 000	220 000	180 000	160 000	200 000
<1 000	1 200	1 200	<1 000	1 500
20 000	29 000	37 000	30 000	44 000
18 000	35 000	52 000	37 000	74 000
3 900 000	4 400 000	5 700 000	5 500 000	6 000 000
52 000	190 000	140 000	88 000	200 000
120 000	140 000	190 000	180 000	200 000
100 000	140 000	110 000	95 000	130 000
730 000	950 000	1 400 000	1 200 000	1 600 000
1 200 000	1 400 000	1 200 000	1 100 000	1 400 000
750 000	860 000	950 000	900 000	1 000 000
1 600 000	1 700 000	1 200 000	1 100 000	1 300 000
550 000	620 000	860 000	800 000	920 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	...	...	
Iceland	...	...	...	
Ireland	...	...	...	
Israel	...	...	...	
Italy	...	...	...	
Latvia	...	...	...	
Lithuania	...	...	...	
Luxembourg	...	...	...	
Malta	...	...	...	
Netherlands	...	...	...	
Norway	...	...	...	
Poland	...	...	...	
Portugal	...	...	...	
Romania	...	...	...	
Serbia	...	...	...	
Slovakia	...	...	...	
Slovenia	...	...	...	
Spain	...	...	...	
Sweden	...	...	...	
Switzerland	...	...	...	
Turkey	...	...	...	
United Kingdom of Great Britain and Northern Ireland	...	...	...	
GLOBAL	27 500 000	24 900 000	30 300 000	32 100

[1] Estimates for China and India are based on 2011 national estimates.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
22 000	28 000	12 000	9 400	14 000
<1 000	<1 000	<500	<500	<500
<200	<200	<100	<100	<100
...	...	<500	<200	1 000
5 000	7 100	<500	<200	<1 000
12 000	16 000	8 500	6 900	11 000
2 300	3 600	1 400	<1 000	2 000
1 200	1 600	<1 000	<1 000	<1 000
50 000	96 000	81 000	34 000	160 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
110 000	180 000	130 000	89 000	190 000
<200	1 200	<500	<200	<1 000
...	...	<1 000	<500	1 600
1 500	2 600	1 600	<1 000	2 400
<500	<1 000	<1 000	<1 000	1 400
...	...	...	...	...
<200	<500	1 700	<1 000	2 600
1 200	3 900	1 800	1 400	2 500
...	...	...	...	...
<500	3 000	2 100	<1 000	5 500
30 000	40 000	11 000	7 500	15 000
...	...	2 300	1 300	3 800
78 000	120 000	86 000	57 000	150 000
...	...	4 200	2 800	6 200

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	2 300	1 600	3 500	1
Brazil	...	...	...	34
Chile	...	...	...	2
Colombia	11 000	7 700	15 000	9
Costa Rica	...	...	...	<1
Ecuador	...	...	...	4
El Salvador	...	...	...	1
Guatemala	...	...	...	3
Guyana	...	...	...	<
Honduras	...	...	...	<1
Mexico	10 000	7 400	14 000	9
Nicaragua	<500	<200	<500	1
Panama	...	...	...	<1
Paraguay	...	...	...	1
Peru	...	...	...	4
Suriname	<500	<500	<500	<
Uruguay	...	...	...	
Venezuela (Bolivarian Republic of)	...	...	...	6
Middle East and North Africa	21 000	16 000	30 000	32
Algeria	...	...	...	
Djibouti	1 700	1 400	2 200	<
Egypt	...	...	...	<1
Iran (Islamic Republic of)	...	...	...	11
Lebanon	...	...	...	
Morocco	...	...	...	3
Oman	...	...	...	
Somalia	...	...	...	3

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
...	...	<500	<200	<1 000
...	...	3 500	1 400	6 800
33 000	**63 000**	**48 000**	**15 000**	**100 000**
...	...	...	...	...
...	...	...	...	...
3 500	**5 400**	**2 100**	**1 500**	**2 700**
...	...	...	...	...
...	...	<200	<200	<200
...	...	<200	<100	<500
2 600	4 600	<1 000	<500	1 200
310 000	**520 000**	**270 000**	**160 000**	**440 000**
...	...	<1 000	<200	2 400
<100	3 500	<1 000	<500	19 000
...	...	<200	<100	<1 000
3 200	14 000	1 400	<1 000	2 900
220 000	310 000	130 000	80 000	230 000
<100	68 000	76 000	47 000	150 000
...	...	1 000	<1 000	1 200
4 200	9 500	7 400	4 800	11 000
...	...	<100	<100	<100
20 000	30 000	7 100	5 700	8 900
7 100	13 000	1 200	<1 000	2 700
1 500	4 100	19 000	8 700	39 000
<500	1 600	1 800	1 100	4 000
...	...	<200	<100	<500
<200	<1 000	<500	<200	<1 000
21 000	38 000	8 800	5 500	24 000
11 000	57 000	13 000	2 300	28 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	**2 600 000**	**2 400 000**	**2 800 000**	**1 600**
Angola	19 000	14 000	26 000	28
Benin	7 400	6 500	8 500	4
Botswana	27 000	25 000	30 000	12
Burkina Faso	8 400	6 700	10 000	5
Burundi	5 600	4 500	7 100	4
Cameroon	62 000	56 000	70 000	45
Cape Verde	...	...	...	<
Central African Republic	...	...	...	
Chad	23 000	19 000	31 000	16
Comoros	...	...	...	
Congo	8 900	8 000	10 000	4
Côte d'Ivoire	58 000	49 000	70 000	30
Democratic Republic of the Congo	51 000	47 000	57 000	34
Equatorial Guinea	...	...	...	2
Eritrea	1 900	1 200	3 100	<
Ethiopia	130 000	110 000	140 000	20
Gabon	5 900	5 000	6 800	1
Gambia	1 500	1 200	2 100	<1
Ghana	28 000	24 000	32 000	8
Guinea	...	...	...	10
Guinea-Bissau	4 200	3 200	5 500	3
Kenya	140 000	130 000	150 000	98
Lesotho	33 000	30 000	36 000	26
Liberia	4 300	3 500	5 100	<
Madagascar	...	...	...	3
Malawi	110 000	100 000	120 000	66
Mali	11 000	8 700	15 000	4

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
...	...	<1 000	<1 000	1 100
150 000	190 000	120 000	97 000	150 000
20 000	27 000	10 000	8 000	13 000
6 500	9 600	1 100	<1 000	1 800
350 000	470 000	260 000	210 000	310 000
15 000	20 000	7 800	5 800	11 000
<200	<500	<100	<100	<100
3 900	5 700	2 000	1 300	3 000
4 500	8 200	3 100	1 200	6 900
600 000	700 000	370 000	340 000	420 000
...	...	15 000	7 500	23 000
16 000	19 000	12 000	9 800	14 000
15 000	21 000	4 800	2 800	7 500
82 000	110 000	140 000	110 000	170 000
120 000	150 000	83 000	69 000	100 000
95 000	110 000	56 000	49 000	64 000
120 000	150 000	69 000	59 000	79 000
...	...	29 000	25 000	35 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	...	...	
Iceland	...	...	...	
Ireland	...	...	...	
Israel	...	...	...	
Italy	...	...	...	
Latvia	...	...	...	
Lithuania	...	...	...	
Luxembourg	...	...	...	
Malta	...	...	...	
Netherlands	...	...	...	
Norway	...	...	...	
Poland	...	...	...	
Portugal	...	...	...	
Romania	...	...	...	
Serbia	...	...	...	
Slovakia	...	...	...	
Slovenia	...	...	...	
Spain	...	...	...	
Sweden	...	...	...	
Switzerland	...	...	...	
Turkey	...	...	...	
GLOBAL	3 400 000	3 100 000	3 700 000	2 300

[1] Estimates for China and India are based on 2011 national estimates.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
19 000	24 000	11 000	9 100	14 000
<1 000	<1 000	<500	<500	<500
<200	<200	<100	<100	<100
...	...	<500	<200	<1 000
4 400	6 300	<500	<200	<1 000
9 700	13 000	8 200	6 600	10 000
2 100	3 300	1 400	<1 000	1 900
1 200	1 500	<500	<500	<1 000
49 000	95 000	80 000	34 000	150 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
110 000	170 000	130 000	89 000	190 000
<200	1 200	<500	<200	<1 000
...	...	<1 000	<500	1 600
1 500	2 600	1 600	<1 000	2 400
<500	<1 000	<1 000	<1 000	1 400
...	...	...	...	...
<200	<500	1 700	<1 000	2 600
1 200	3 900	1 800	1 400	2 400
...	...	...	...	...
<500	3 100	2 000	<1 000	5 200
29 000	39 000	11 000	7 400	15 000
...	...	2 300	1 300	3 800
72 000	110 000	84 000	56 000	150 000
...	...	4 200	2 800	6 100

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	2 200	1 400	3 300	1
Brazil	...	...	...	
Chile	...	...	...	2
Colombia	9 900	7 100	14 000	8
Costa Rica	...	...	...	<1
Ecuador	...	...	...	4
El Salvador	...	...	...	1
Guatemala	...	...	...	2
Guyana	...	...	...	<
Honduras	...	...	...	<1
Mexico	9 800	6 900	13 000	9
Nicaragua	<500	<200	<500	1
Panama	...	...	...	<1
Paraguay	...	...	...	1
Peru	...	...	...	4
Suriname	<500	<500	<500	<
Uruguay	...	...	...	
Venezuela (Bolivarian Republic of)	...	...	...	6
Middle East and North Africa	18 000	14 000	25 000	29
Algeria	...	...	...	
Djibouti	1 600	1 200	2 000	<
Egypt	...	...	...	<1
Iran (Islamic Republic of)	...	...	...	11
Lebanon	...	...	...	
Morocco	...	...	...	3
Oman	...	...	...	
Somalia	...	...	...	2

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
...	...	<500	<200	<1 000
...	...	3 200	1 300	6 000
33 000	63 000	48 000	15 000	100 000
...	...	...	...	...
...	...	...	...	...
3 100	4 800	1 800	1 200	2 400
...	...	...	...	...
...	...	<200	<200	<200
...	...	...	...	...
2 200	4 100	<500	<500	<1 000
280 000	480 000	250 000	140 000	410 000
...	...	<1000	<200	2 200
<100	3 400	<1 000	<500	18 000
...	...	<200	<100	<1 000
2 500	12 000	1 200	<100	<100
190 000	280 000	120 000	70 000	210 000
<100	67 000	72 000	44 000	140 000
...	...	<1 000	<1 000	1 100
4 100	9 400	7 300	4 700	11 000
...	...	<100	<100	<100
19 000	29 000	6 400	5 000	8 000
6 600	12 000	<1 000	<500	2 000
1 500	4 000	18 000	8 400	38 000
<500	1 500	1 700	1 100	3 900
...	...	...	...	...
<200	<1 000	<500	<200	<1 000
20 000	36 000	8 700	5 400	23 000
11 000	55 000	13 000	2 200	27 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	2 100 000	1 900 000	2 200 000	1 400
Angola	16 000	12 000	21 000	23
Benin	5 900	5 100	6 900	3
Botswana	24 000	22 000	26 000	12
Burkina Faso	3 800	2 600	5 400	4
Burundi	2 000	1 100	2 900	3
Cameroon	53 000	47 000	60 000	39
Cape Verde	...	...	...	<
Central African Republic	...	...	...	
Chad	18 000	14 000	24 000	12
Comoros	...	...	...	
Congo	6 600	5 900	7 600	3
Côte d'Ivoire	46 000	37 000	56 000	25
Democratic Republic of the Congo	38 000	34 000	42 000	24
Equatorial Guinea	...	...	...	2
Eritrea	1 200	<1 000	2 500	<
Ethiopia	87 000	74 000	100 000	11
Gabon	5 200	4 300	6 000	<1
Gambia	1 300	1 000	1 800	<1
Ghana	23 000	19 000	27 000	7
Guinea	...	...	...	8
Guinea-Bissau	3 600	2 700	4 700	2
Kenya	97 000	90 000	110 000	85
Lesotho	27 000	24 000	30 000	23
Liberia	3 600	2 900	4 400	<
Madagascar	...	...	...	2
Malawi	83 000	78 000	91 000	55
Mali	8 200	6 000	11 000	3

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	<1 000	<1 000	1 100
130 000	160 000	100 000	85 000	130 000
18 000	23 000	9 700	74 00	12 000
5 100	7 600	<200	<100	<500
290 000	400 000	200 000	160 000	250 000
8 800	13 000	6 900	5 100	9 300
<200	<500	<100	<100	<100
3 300	4 800	1 300	<1 000	2 100
4 100	7 400	2 800	1 000	6 100
530 000	620 000	350 000	320 000	390 000
…	…	12 000	6 000	19 000
13 000	15 000	10 000	8 400	12 000
12 000	18 000	4 100	2 300	6 500
59 000	81 000	120 000	100 000	150 000
80 000	100 000	69 000	58 000	85 000
70 000	81 000	46 000	41 000	54 000
87 000	110 000	59 000	51 000	69 000
…	…	29 000	25 000	34 000
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	…	…	…	
Iceland	…	…	…	
Ireland	…	…	…	
Israel	…	…	…	
Italy	…	…	…	
Latvia	…	…	…	
Lithuania	…	…	…	
Luxembourg	…	…	…	
Malta	…	…	…	
Netherlands	…	…	…	
Norway	…	…	…	
Poland	…	…	…	
Portugal	…	…	…	
Romania	…	…	…	
Serbia	…	…	…	
Slovakia	…	…	…	
Slovenia	…	…	…	
Spain	…	…	…	
Sweden	…	…	…	
Switzerland	…	…	…	
Turkey	…	…	…	
United Kingdom of Great Britain and Northern Ireland	…	…	…	
GLOBAL	2 800 000	2 600 000	3 100 000	2 000

[1] Estimates for China and India are based on 2011 national estimates.

Females		Males		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
0.4	0.6	0.3	0.3	0.4
1.4	2.2	1.3	1.0	1.6
0.2	0.3	0.4	0.3	0.5
<0.1	<0.1	<0.1	<0.1	<0.1
0.1	0.3	0.1	<0.1	0.2
0.8	1.1	0.6	0.4	0.8
0.4	0.6	0.9	0.5	1.5
0.7	1.2	0.6	0.5	0.7
<0.1	<0.1	<0.1	<0.1	0.1
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
0.1	0.3	0.3	0.2	0.4
<0.1	<0.1	<0.1	<0.1	0.1
<0.1	<0.1	0.2	0.1	0.3
0.1	0.3	0.3	0.2	0.4
<0.1	0.2	0.3	0.2	0.5
...	...	...	...	...
<0.1	<0.1	0.2	<0.1	0.2
0.1	0.3	0.2	0.1	0.2
...	...	...	...	...
<0.1	0.3	0.1	<0.1	0.3
0.3	0.7	0.4	0.3	0.5
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	0.2	0.2	0.1	0.4
<0.1	0.2	0.2	0.1	0.3

	Females			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	<0.1	<0.1	0.2	0.
Brazil	...	0.1	0.1	.
Chile	<0.1	<0.1	0.1	0.
Colombia	0.2	0.1	0.3	0.
Costa Rica	0.2	0.1	0.2	0.
Ecuador	0.2	0.1	0.5	0.
El Salvador	0.2	0.1	0.5	0.
Guatemala	0.2	0.1	0.8	0.
Guyana	0.8	0.4	1.5	0.
Honduras	0.2	0.1	0.2	0.
Mexico	<0.1	<0.1	<0.1	0.
Nicaragua	0.2	0.1	0.3	0.
Panama	0.3	0.2	0.4	0.
Paraguay	0.3	0.1	0.6	0.
Peru	0.2	<0.1	0.6	0.
Suriname	0.7	0.5	0.9	0.
Uruguay	0.2	0.1	0.4	0.
Venezuela (Bolivarian Republic of)	0.3	0.1	0.4	0.
Middle East and North Africa	<0.1	<0.1	0.1	<0.
Algeria	...	...	...	.
Djibouti	0.3	0.2	0.5	0.
Egypt	<0.1	<0.1	<0.1	<0.
Iran (Islamic Republic of)	<0.1	<0.1	0.2	0.
Lebanon	...	...	...	.
Morocco	<0.1	<0.1	0.1	0.
Oman	...	...	...	.
Somalia	0.2	0.1	0.4	0.

Females		Males		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	0.3	0.1	<0.1	0.3
<0.1	**0.2**	**0.3**	**0.1**	**0.5**
...	...	...	...	...
...	...	...	...	...
<0.1	**<0.1**	**<0.1**	**<0.1**	**0.1**
...	...	...	...	...
<0.1	0.2	0.1	<0.1	0.2
...	...	...	...	...
<0.1	0.2	<0.1	<0.1	0.1
<0.1	**0.2**	**0.1**	**<0.1**	**0.2**
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	<0.1	<0.1	<0.1	0.1
<0.1	0.2	0.1	<0.1	0.4
0.1	0.3	0.2	0.1	0.2
<0.1	0.2	0.1	<0.1	0.2
0.3	0.8	0.4	0.2	0.8
0.2	0.3	0.2	0.1	0.3
<0.1	<0.1	0.1	<0.1	0.2
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	0.1	<0.1	<0.1	0.2
<0.1	0.1	<0.1	<0.1	0.2
<0.1	<0.1	<0.1	<0.1	<0.1
<0.1	<0.1	<0.1	<0.1	<0.1
...	...	...	...	...
<0.1	<0.1	<0.1	<0.1	<0.1
0.2	0.4	0.3	0.2	0.6
<0.1	0.2	0.2	<0.1	0.6

	Females			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	**2.5**	**2.3**	**3.0**	**1.**
Angola	1.2	0.9	1.5	0.
Benin	0.4	0.3	0.5	0.
Botswana	6.7	5.8	8.4	3.
Burkina Faso	0.5	0.4	0.6	0.
Burundi	0.6	0.4	0.8	0.
Cameroon	1.8	1.6	2.3	1.
Cape Verde	<0.1	<0.1	0.2	<0.
Central African Republic	...	...	...	.
Chad	1.1	0.8	1.5	0.
Comoros	...	...	...	.
Congo	1.3	1.1	1.6	0.
Côte d'Ivoire	1.2	1.0	1.6	0.
Democratic Republic of the Congo	0.8	0.7	1.0	0.
Equatorial Guinea	3.1	1.6	5.5	1.
Eritrea	0.2	0.1	0.3	0.
Ethiopia	0.5	0.3	0.6	0.
Gabon	1.6	1.1	2.6	0.
Gambia	0.5	0.3	0.8	0.
Ghana	0.5	0.4	0.6	0.
Guinea	0.8	0.6	1.1	0.
Guinea-Bissau	1.7	1.1	2.6	0.
Kenya	3.6	3.0	4.6	1.
Lesotho	10.7	9.4	13.0	5.
Liberia	0.1	<0.1	0.2	<0.
Madagascar	0.3	0.2	0.4	0.
Malawi	4.5	4.0	5.4	2.
Mali	0.3	0.2	0.5	0.

Females			Males	
lower estimate	upper estimate	estimate	lower estimate	upper estimate
5.7	8.1	2.8	2.1	3.8
3.2	5.5	2.2	1.4	3.4
<0.1	0.2	<0.1	<0.1	0.1
1.1	1.6	0.7	0.4	1.0
1.2	1.6	1.0	0.8	1.2
0.3	0.7	0.3	0.1	0.6
0.2	0.4	0.1	<0.1	0.2
0.6	1.7	0.3	0.1	0.5
12.9	16.8	3.9	2.5	5.7
0.7	2.0	0.6	0.3	1.2
17.2	24.5	10.3	6.7	14.7
0.7	1.3	0.5	0.3	0.8
3.4	4.9	2.3	1.6	3.2
3.1	4.6	1.8	1.3	2.6
4.1	5.6	3.5	2.5	4.9
5.6	7.5	3.9	2.9	5.2
<0.1	**<0.1**	**<0.1**	**<0.1**	**0.1**
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	Females			
	estimate	lower estimate	upper estimate	estim
Iceland	...	...	...	.
Ireland	...	...	...	.
Israel	...	...	...	.
Italy	...	...	...	.
Latvia	...	...	...	.
Lithuania	...	...	...	.
Luxembourg	...	...	...	.
Malta	...	...	...	.
Netherlands	...	...	...	.
Norway	...	...	...	.
Poland	...	...	...	.
Portugal	...	...	...	.
Romania	...	...	...	.
Serbia	...	...	...	.
Slovakia	...	...	...	.
Slovenia	...	...	...	.
Spain	...	...	...	.
Sweden	...	...	...	.
Switzerland	...	...	...	.
Turkey	...	...	...	.
United Kingdom of Great Britain and Northern Ireland	...	...	...	.
GLOBAL	**0.5**	**0.4**	**0.6**	**0.**

[1] For the indicator definition, go to http://www.indicatorregistry.org/node/844
[2] Estimates for China and India are based on 2011 national estimates.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
21 000	27 000	11 000	9 400	14 000
<500	<500	<500	<500	<500
<100	<100	<100	<100	<100
<200	<500	<100	<100	<100
3 900	5 500	1 900	1 400	2 600
14 000	17 000	7 500	6 200	8 900
2 300	3 400	1 300	<1 000	1 800
<500	<1 000	<500	<500	<1 000
12 000	35 000	41 000	25 000	64 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
26 000	47 000	91 000	66 000	120 000
<100	<200	<500	<200	<500
<100	<200	<1 000	<500	<1 000
<200	<500	1 200	1 000	1 500
<100	<100	<200	<200	<500
...	...	...	...	...
<100	<200	<500	<200	<1 000
<1 000	<1 000	1 300	<1 000	1 800
...	...	...	...	...
<100	<200	<1 000	<500	<1 000
6 900	10 000	18 000	15 000	22 000
<1 000	2 900	2 400	1 700	3 500
63 000	100 000	52 000	35 000	75 000
1 700	4 300	3 700	2 200	5 300

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	<1 000	<1 000	1 700	1
Brazil	...	18 000	27 000	
Chile	...	...	...	
Colombia	8 700	6 400	12 000	6
Costa Rica	<200	<200	<200	<
Ecuador	2 800	1 100	4 700	2
El Salvador	1 600	1 100	2 400	<1
Guatemala	2 000	1 100	3 200	3
Guyana	<200	<100	<500	<
Honduras	3 600	3 000	4 400	1
Mexico	...	...	...	
Nicaragua	<100	<100	<200	<
Panama	1 700	1 300	2 100	<1
Paraguay	<500	<200	<1 000	<
Peru	9 300	4 900	15 000	4
Suriname	<500	<200	<500	<
Uruguay	...	...	...	
Venezuela (Bolivarian Republic of)	6 800	4 100	11 000	3
Middle East and North Africa	8 300	4 600	14 000	17
Algeria	...	...	...	
Djibouti	<1 000	<500	<1 000	<1
Egypt	<200	<100	<500	<
Iran (Islamic Republic of)	<500	<200	1 200	4
Lebanon	...	...	...	
Morocco	<500	<500	<500	1
Oman	...	...	...	
Somalia	2 000	<1 000	3 300	2

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<100	<100	<100	<100	<200
<100	<500	<1 000	<500	2 400
15 000	24 000	20 000	16 000	27 000
...	...	...	...	...
...	...	...	...	...
<1 000	2 200	1 200	<1 000	1 800
...	...	...	...	...
<100	<100	<100	<100	<100
...	...	...	...	...
<1 000	2 000	<1 000	<1 000	1 600
160 000	320 000	220 000	150 000	310 000
<100	<500	<500	<100	<1 000
<100	<1 000	<500	<200	2 300
<100	<100	<100	<100	<200
4 500	9 500	2 700	1 900	4 700
99 000	210 000	140 000	100 000	170 000
<100	41 000	27 000	16 000	42 000
<100	<500	<500	<500	<1 000
3 000	6 000	5 200	3 100	8 000
<100	<100	<100	<100	<100
8 500	11 000	12 000	9 700	14 000
1 200	2 200	4 100	3 100	5 600
<500	<1 000	3 500	2 100	6 600
<200	<1 000	<500	<200	<1 000
...	...	...	...	...
<100	<200	<200	<200	<500
54 000	67 000	21 000	18 000	24 000
<1 000	12 000	12 000	2 500	24 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	1 500 000	1 400 000	1 700 000	1 200
Angola	8 400	6 200	13 000	13
Benin	4 100	3 400	4 900	3
Botswana	21 000	19 000	23 000	5
Burkina Faso	19 000	17 000	23 000	5
Burundi	13 000	11 000	16 000	4
Cameroon	29 000	26 000	33 000	35
Cape Verde	<200	<100	<200	<
Central African Republic	...	...	...	
Chad	14 000	11 000	16 000	14
Comoros	...	...	...	
Congo	9 000	8 000	10 000	5
Côte d'Ivoire	46 000	40 000	55 000	31
Democratic Republic of the Congo	31 000	28 000	36 000	32
Equatorial Guinea	<1 000	<500	1 300	1
Eritrea	2 700	1 400	3 800	1
Ethiopia	100 000	89 000	110 000	47
Gabon	2 400	2 000	2 800	2
Gambia	<500	<500	<500	<1
Ghana	19 000	16 000	24 000	12
Guinea	3 300	2 500	4 500	5
Guinea-Bissau	<1 000	<1 000	1 300	2
Kenya	130 000	120 000	140 000	57
Lesotho	16 000	15 000	18 000	15
Liberia	2 000	1 600	2 500	1
Madagascar	4 600	3 800	5 700	6
Malawi	86 000	81 000	95 000	46
Mali	7 800	5 500	10 000	4

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<500	<1 000	<1 000	<1 000	<1 000
35 000	46 000	77 000	65 000	93 000
7 900	11 000	5 000	3 400	7 100
2 600	3 900	3 400	2 600	4 300
120 000	200 000	240 000	210 000	280 000
21 000	26 000	5 600	4 200	7 500
<100	<100	<100	<100	<200
1 100	1 600	1 900	1 400	2 500
<1 000	1 700	3 300	2 200	5 100
190 000	230 000	240 000	220 000	270 000
1 900	17 000	13 000	8 400	20 000
6 900	8 700	5 500	4 800	6 300
6 500	9 800	7 200	5 500	9 500
94 000	120 000	63 000	52 000	81 000
100 000	130 000	80 000	69 000	94 000
72 000	84 000	30 000	26 000	36 000
150 000	170 000	39 000	34 000	45 000
7 300	8 700	7 600	6 900	8 300
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	...	...	
Iceland	...	...	...	
Ireland	...	...	...	
Israel	...	...	...	
Italy	...	...	...	
Latvia	...	...	...	
Lithuania	...	...	...	
Luxembourg	...	...	...	
Malta	...	...	...	
Netherlands	...	...	...	
Norway	...	...	...	
Poland	...	...	...	
Portugal	...	...	...	
Romania	...	...	...	
Serbia	...	...	...	
Slovakia	...	...	...	
Slovenia	...	...	...	
Spain	...	...	...	
Sweden	...	...	...	
Switzerland	...	...	...	
Turkey	...	...	...	
United Kingdom of Great Britain and Northern Ireland	...	...	...	
GLOBAL	1 900 000	1 700 000	2 200 000	1 600

[1] Estimates for China and India are based on 2011 national estimates.

	Population receiving an HIV test and receiving test results in the last 12 months[1]		Percentage of adults 15-49 who report having more than one sexual partner in the past 12 months[2]		Percentage of adults 15-49 who had more than one sexual partner in the past 12 months who reported use of a condom during last intercourse[3]	
, Source	Females	Males	Females	Males	Females	Males
7, DHS	20.5	18.6	3.0	24.3	34.9	45.0
2, DHS	20.6	13.4	1.3	23.0	43.2	43.3
0, DHS	1.9	0.5	0	15.2	...	72.3
6, DHS			0	6.1	...	26.0
5, DHS	11.9	10.1	1.3	11.3	27.4	71.5
7, DHS	12.3	7.2	2.3	12.9	48.0	46.4
8, DHS	...	1.9	...	12.0	...	35.2
0, DHS	8.9	...	3.9	...	33.7	...
9, DHS	27.0	21.6	1.3	9.9	47.9	65.4
-06, DHS	...	...	0.7	...	26.5	...
0, DHS	8.0	6.1	0	1.5	...	39.5
06, NFHS	1.2	1.4	0.1	1.3	11.8	22.7
1, DHS	2.9	7.5	0.1	3.8	...	26.5
9, DHS	...	...	0	1.4	...	19.1
5, PAIS	2.0	2.6	...	...	...	...
2, DHS	14.6	5.2	1.3	21.2	29.9	22.1
0, DHS	11.2	8.4	0.6	16.6	62.3	26.5
0, DHS	18.7	11.7	0.3	3.1	14.3	14.3
1, MICS	22.3	20.4	...	...	37.3	43.0
12, AIS	47.3	27.9	5.0	34.4	51.1	73.2
09, AIS	8.5	7.1	6.8	28.4	29.0	27.9

	Population receiving an HIV test and receiving test results in the last 12 months[1]		Percen 15-49 having one se the pa
Year, Source	Females	Males	Fema
Eritrea 2012, DHS	41.5	41.7	56.4
Ethiopia 2011, DHS	20.0	20.7	0.4
Kenya 2008–09, DHS	29.3	22.8	1.2
Gabon 2012, DHS	10.1	29.0	..
Ghana 2008, DHS	6.8	4.1	1.0
Guinea 2005, DHS	1.1	2.9	2.0
Lesotho 2009, DHS	42.0	24.0	6.4
Liberia 2007, DHS	1.6	2.3	5.8
Madagascar 2008–09, DHS	4.2	3.6	2.1
Malawi 2010, DHS	...	31.3	0.7
Mali 2006, DHS	3.1	2.7	1.2
Mozambique 2011, DHS	25.9	14.2	2.8
Namibia 2006, DHS	28.6	17.6	1.7
Niger 2006, DHS	0.9	1.6	0.7
Nigeria 2008, DHS	6.6	6.5	1.0
Rwanda 2010–11, DHS	38.6	37.7	0.6
Sao Tome and Principe 2008–09, DHS	31.4	22.8	1.0
Senegal 2010–11, DHS	13.6	9.0	0.5
Sierra Leone 2008, DHS	4.1	3.4	3.5
Swaziland 2006–07, DHS	21.9	8.9	1.6
United Republic of Tanzania 2010, DHS	29.5	25.0	3.5
Uganda 2006, DHS	12.0	10.4	1.8
Zambia 2007, DHS	18.5	11.7	1.2
Zimbabwe 2010–11, DHS	33.6	20.5	1.1
Western and Central Europe			
Albania 2008–09, DHS	0.2	0.6	0.1

Year when estimation was performed		Population size estimate	Year when estimation was performed
	Nepal	26 878	2011
2011	Pakistan	136 000	2009
	Sri Lanka	41 000	2010
2010	Thailand	123 530	2012
2011	Viet Nam	65 166	2011
2012	**Sub-Saharan Africa**		
2012	Benin	12 789	2012
2010	Cape Verde	1 096	2011
2011	Chad	1 171	2009
2009	Comoros	200	2012
	Equatorial Guinea	5 791	2012
2012	Gambia	3 100	2009
2012	Ghana	51 937	2011
2011	Guinea	4 796	2012
2011	Guinea-Bissau	3 138	2012
2012	Kenya	133 675 [76 654–208 711]	2012
2012	Liberia	1 822	2011
2011	Mauritius	9 000	2012
2010	Niger	27 471	2012
	Nigeria	459 887	2012
2012	Rwanda	12 278	2012
2011	Senegal	4 200	2012
2010	Togo	8 000	2009
2012	**Western and Central Europe**		
	Serbia	3 901	2011
2011			
2012			
2009			
2010			

Note: UNAIDS did not request sources or methods for key population size estimates. We present these data as reflective of the reporting

	2009	2012
Caribbean		
Cuba	56	70
Dominican Republic	81	85
Haiti	90	90
Jamaica	97	91
East Asia		
Mongolia	90	80
Eastern Europe and Central Asia		
Belarus	70	85
Kazakhstan	96	97
Kyrgyzstan	94	88
Tajikistan	84	71
Latin America		
Argentina	99	96
Colombia	...	98
El Salvador	...	97
Guatemala	96	99
Guyana	61	94
Honduras	80	79
Nicaragua	74	96
Panama	76	99
Middle East and North Africa		
Morocco	54	50
Tunisia	52	55
Oceania		
Papua New Guinea	50	80
South and South-East Asia		
Afghanistan	58	51
Indonesia		
Lao People's Democratic Repu		
Malaysia		
Pakistan		
Viet Nam		
Sub-Saharan Afri		
Benin		
Burkina Faso		
Burundi		
Cameroon		
Côte d'Ivoire		
Democratic Repu of the Congo		
Eritrea		
Gabon		
Guinea		
Guinea-Bissau		
Niger		
Senegal		
Togo		
Western and Cer		
Bosnia and Herzegovina		
Estonia		
Montenegro		
Romania		
Serbia		
The former Yugos Republic of Mace		

Note: Data presented in this annex are only those data included in the trend analyses in the text, i.e., from points since 2007. All reported country data are available at AIDSinfo Online Database (www.aidsinfoonlir

2012
1.0
3.7
8.4
4.6
0.2
0.7
1.2
3.5
3.7
5.4
0.6
4.9
0.3
16.6
2.8
2.0
0.6
17.8
0.3

	2009	2012
Indonesia	10.2	9.0
Lao People's Democratic Republic	0.5	1.0
Malaysia	10.5	4.2
Myanmar	18.1	7.1
Pakistan	2.3	2.4
Viet Nam	3.2	2.7
Sub-Saharan Africa		
Benin	24.7	21.0
Burkina Faso	8.9	16.4
Burundi	39.8	26.5
Cameroon	35.5	36.8
Chad	20.0	20.0
Côte d'Ivoire	35.5	28.7
Eritrea	7.8	6.0
Guinea	32.7	16.7
Guinea-Bissau	39.6	39.0
Niger	35.6	17.3
Senegal	19.8	18.5
Togo	29.3	13.1
Western and Central Europe		
Bosnia and Herzegovina	0	0.5
Estonia	7.7	6.2
Lithuania	0	0.3
Montenegro	0.8	0
Serbia	2.2	2.0

ata included in the trend analyses in the text, i.e., from countries reporting a minimum of 3 unique data
lable at AIDSinfo Online Database (www.aidsinfoonline.org).

atorregistry.org/node/847.

	Population size estimate	Year when estimation was performed
Caribbean		
Jamaica	38 138	2011
Eastern Europe and Central Asia		
Armenia	6 600	2010
Azerbaijan	6 572	2011
Belarus	55 000	2012
Kazakhstan	31 940	2012
Republic of Moldova	22 285	2011
Latin America		
Argentina	300 000	2012
El Salvador	19 688	2011
Guatemala	109 152	2011
Nicaragua	40 956	2012
Panama	[30 335–43 336]	2012
Paraguay	24 159	2011
Peru	435 426	2010
Middle East and North Africa		
Egypt	48 000	2011
Morocco	44 000	2010
Tunisia	28 000	2012
North America		
Canada	369 532 [312 681–426 384]	2011
South and South-East Asia		
Bangladesh	[21 833–110 581]	2010

Nepal
Sri Lanka
Thailand
Viet Nam
Sub-Saharan Afri
Benin
Comoros
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Liberia
Mauritius
Niger
Nigeria
Senegal
Seychelles
Togo
Western and Cer
Serbia
United Kingdom Great Britain and Northern Ireland

Note: UNAIDS did not request sources or methods for key population size estimates. We present these d
commitments to estimate population size. UNAIDS cannot vouch for the accuracy of these estimates. Any
with very careful consideration.

2012
59
40
73
77
70
63
73
86
60
56
57
61
71
51
48
74
20
29
63

	2009	2012
South and South-East Asia		
Bangladesh	31	26
Indonesia	57	60
Malaysia	21	77
Nepal	75	75
Viet Nam	66	67
Sub-Saharan Africa		
Burkina Faso	52	58
Cameroon	43	57
Côte d'Ivoire	42	70
Senegal	76	76
Togo	72	47
Western and Central Europe		
Bosnia and Herzegovina	56	20
Bulgaria	70	66
Estonia	47	42
Latvia	50	40
Lithuania	47	48
Romania	43	42
Serbia	67	58
The former Yugoslav Republic of Macedonia	56	49

ata included in the trend analyses in the text, i.e., from countries reporting a minimum of 3 unique data
ilable at AIDSinfo Online Database (www.aidsinfoonline.org).

atorregistry.org/node/664.

	2009	2012
Caribbean		
Cuba	0.7	7.4
Dominican Republic	10.7	7.1
Jamaica	31.8	37.6
East Asia		
Mongolia	1.8	10.7
Eastern Europe and Central Asia		
Belarus	2.7	1.3
Georgia	3.6	13.0
Kazakhstan	0.3	0.6
Latin America		
Argentina	11.8	15.7
Brazil	12.6	10.5
Costa Rica	12.7	10.9
El Salvador	9.8	10.2
Guatemala	7.6	13.3
Guyana	19.4	19.4
Honduras	6.6	6.8
Nicaragua	4.2	6.6
Peru	10.1	12.4
Middle East and North Africa		
Egypt	5.6	4.1

Lebanon
Tunisia
South and South-
Indonesia
Lao People's Democratic Repul
Malaysia
Thailand
Viet Nam
Sub-Saharan Afri
Côte d'Ivoire
South Africa
Western and Cen
Bosnia and Herzegovina
Bulgaria
Latvia
Lithuania
Romania
Serbia
The former Yugos Republic of Macedonia

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points since 2007. All reported country data are available at AIDSinfo Online Database (www.aidsinfoonlir

[1] For the indicator definition, go to http://www.indicatorregistry.org/node/850.

Year when estimation was performed		Population size estimate	Year when estimation was performed
	Sri Lanka	1 200	2012
2010	Thailand	40 300	2011
2011	Viet Nam	217 432	2011
2012	**Sub-Saharan Africa**		
2012	Benin	35	2012
2011	Cape Verde	15	2011
2009	Kenya	18 327	2012
	Liberia	457	2011
2011	Madagascar	14 445	2011
	Mauritius	10 000	2011
2011	Niger	670	2012
2012	Nigeria	11 692	2012
2012	Senegal	1 324	2011
	Seychelles	345	2011
2011	Togo	390	2011
	Western and Central Europe		
2009	Romania	19 265	2011
2011	Serbia	30 383	2011
2009	United Kingdom of Great Britain and Northern Ireland	547 500	2011

or key population size estimates. We present these data as reflective of the reporting countries' cannot vouch for the accuracy of these estimates. Any secondary use of these data should be conducted

2010	2011	2012
...	180	193
16	28	28
...	49	37
47	48	21
27	22	23
176	154	190
...	151	253
66	58	60
104	88	199
62	75	...
...	173	124
3	7	12
...	30	74
...	13	45
...	15	9
...	203	203
...	277	...
35	80	119
214	264	237
44	120	35
228	387	163
10	7	22
...	...	182
17	116	94

	2010	20
Nepal	57	7
Pakistan	...	4
Thailand	...	1
Viet Nam	141	14
Sub-Saharan Africa		
Madagascar	...	54
Mauritius	52	3
Senegal	...	1
Western and Central Europe		
Albania	...	9
Bosnia and Herzegovina	51	2
Bulgaria	...	3
Cyprus	...	<
Czech Republic	...	20
Estonia	...	15
Finland	...	20
Greece	...	
Hungary	66	11
Latvia	17	1
Lithuania	...	3
Luxembourg	...	12
Malta	...	30
Norway	...	25
Poland	...	7
Romania	55	4
Serbia	26	6
Sweden	...	21
Switzerland	...	8
The former Yugoslav Republic of Macedonia	49	2

	2012
	53
	34
	51
	49
	23
	52
	43
	41
	58
	45
	15
	31
	19
	36
	19

	2009	2012
South and South-East Asia		
Afghanistan	35	23
Bangladesh	43	45
Indonesia	36	52
Malaysia	28	27
Nepal	51	47
Pakistan	31	23
Thailand	42	49
Viet Nam	52	49
Sub-Saharan Africa		
Benin	30	53
Mauritius	31	25
Western and Central Europe		
Bosnia and Herzegovina	30	31
Bulgaria	38	59
Estonia	66	36
Romania	17	56
Serbia	29	31
Sweden	7	8
Switzerland	50	48
The former Yugoslav Republic of Macedonia	51	54

ata included in the trend analyses in the text, i.e., from countries reporting a minimum of 3 unique data
lable at AIDSinfo Online Database (www.aidsinfoonline.org).

atorregistry.org/node/852.

	2009	2012
Eastern Europe and Central Asia		
Belarus	87	89
Georgia	48	83
Kazakhstan	63	58
Republic of Moldova	99	100
Tajikistan	63	94
Uzbekistan	82	80
Latin America		
Brazil	54	54
Mexico	40	41
Paraguay	71	92
Middle East and North Africa		
Iran (Islamic Republic of)	74	92
Morocco	7	67
Tunisia	78	88
Oceania		
Australia	80	79
South and South-East Asia		
Afghanistan	94	78
Bangladesh	32	36

Indonesia
Malaysia
Nepal
Pakistan
Thailand
Viet Nam
Sub-Saharan Afri
Benin
Mauritius
Western and Cen
Albania
Bosnia and Herze
Lithuania
Montenegro
Romania
Serbia
Sweden
The former Yugos Republic of Mace

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points since 2007. All reported country data are available at AIDSinfo Online Database (www.aidsinfoonlir

[1] For the indicator definition, go to http://www.indicatorregistry.org/node/853.

	2012
	17.1
	3.0
	4.0
	14.6
	7.9
	13.5
	5.9
	5.8
	13.6
	11.4
	3.0
	10.9
	1.2
	0.4
	4.4
	1.1
	36.4

	2009	2012
Malaysia	22.1	18.9
Myanmar	36.3	18.0
Nepal	20.7	6.3
Pakistan	20.8	27.2
Thailand	38.7	25.2
Viet Nam	18.4	11.6
Sub-Saharan Africa		
Mauritius	47.1	51.6
Western and Central Europe		
Albania	0	0.5
Bosnia and Herzegovina	0.4	0.3
Bulgaria	6.8	7.0
Estonia	62.5	52.4
Latvia	22.6	11.2
Lithuania	8.0	4.6
Luxembourg	1.8	2.4
Montenegro	0	0.3
Romania	1.1	6.9
Serbia	4.8	1.7
Switzerland	10.9	7.3
The former Yugoslav Republic of Macedonia	0.8	0
United Kingdom of Great Britain and Northern Ireland	1.6	1.0

ata included in the trend analyses in the text, i.e., from countries reporting a minimum of 3 unique data
lable at AIDSinfo Online Database (www.aidsinfoonline.org).

atorregistry.org/node/855.

2012
14
90
44
70
50
74
27
34
100
54
97
78
100
98
15
95
45
70
21
97
68
100
90

	2012
El Salvador	11
Guatemala	14
Guyana	39
Honduras	39
Nicaragua	55
Panama	35
Paraguay	43
Peru	17
Uruguay	100
Venezuela (Bolivarian Republic of)	26
Middle East and North Africa	
Algeria	100
Djibouti	28
Egypt	100
Iran (Islamic Republic of)	46
Lebanon	9
Morocco	47
Oman	52
Tunisia	7
United Arab Emirates	100
Yemen	20
Oceania	
Australia	100
Fiji	71
Micronesia (Federated States of)	0
New Zealand	100
Papua New Guinea	31

	2012
Samoa	1
South and South-East Asia	
Cambodia	33
Lao People's Democratic Republic	7
Malaysia	100
Myanmar	7
Pakistan	0
Philippines	3
Sri Lanka	40
Thailand	77
Viet Nam	24
Sub-Saharan Africa	
Angola	9
Benin	26
Botswana	39
Burkina Faso	40
Burundi	8
Cameroon	46
Cape Verde	63
Chad	3
Comoros	0
Congo	8
Côte d'Ivoire	15
Democratic Republic of the Congo	3
Ethiopia	19
Gabon	47
Ghana	16

Guinea
Kenya
Liberia
Madagascar
Malawi
Mali
Mauritius
Mozambique
Namibia
Rwanda
Senegal
Sierra Leone
Togo
United Republic o
Zambia
Zimbabwe
Western and Cen
Albania
Bosnia and Herzeg
Bulgaria
Poland
Romania
Serbia
Slovakia
Spain

[1] For the indicator definition, go to http://www.indicatorregistry.org/node/857.
[2] Based on data reported by countries in the Global AIDS Response Progress Report, 2013.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
3 000	4 000	<500	<500	<1 000
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
2 100	2 900	<500	<500	<1 000
…	…	…	…	…
…	…	…	…	…
<1 000	1 500	1 500	<1 000	3 300
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
2 900	4 700	<1 000	<500	1 200
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
6 000	9 000	2 000	<1 000	4 600
…	…	…	…	…

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	…	…	…	
Brazil	…	…	…	
Chile	…	…	…	
Colombia	…	…	…	
Costa Rica	…	…	…	
Ecuador	…	…	…	
El Salvador	…	…	…	
Guatemala	…	…	…	
Guyana	…	…	…	
Honduras	…	…	…	
Mexico	…	…	…	
Nicaragua	…	…	…	
Panama	…	…	…	
Paraguay	…	…	…	
Peru	…	…	…	
Suriname	…	…	…	
Uruguay	…	…	…	
Venezuela (Bolivarian Republic of)	…	…	…	
Middle East and North Africa	2 600	1 700	4 200	3 0
Algeria	…	…	…	
Djibouti	<200	<200	<500	<2
Egypt	…	…	…	
Iran (Islamic Republic of)	…	…	…	
Lebanon	…	…	…	
Morocco	…	…	…	
Oman	…	…	…	
Somalia	…	…	…	

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
...	...	...	...	...
...	...	...	...	...
<200	<500	<200	<200	<500
...	...	...	...	...
...	...	...	...	...
<500	< 1 000	<500	<200	<500
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
<500	<1 000	<500	<200	<500
26 000	42 000	21 000	16 000	32 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	500 000	460 000	560 000	230 0
Angola	3 600	2 600	5 300	5 1
Benin	1 500	1 300	1 800	<1 0
Botswana	3 200	2 900	3 500	<5
Burkina Faso	4 600	3 800	5 500	1 3
Burundi	3 600	3 000	4 500	1 3
Cameroon	9 700	8 500	11 000	5 8
Cape Verde	...	...	...	
Central African Republic	...	...	...	
Chad	5 200	4 300	6 200	4 1
Comoros	...	...	...	
Congo	2 300	2 000	2 600	1 3
Côte d'Ivoire	13 000	11 000	15 000	4 7
Democratic Republic of the Congo	14 000	12 000	16 000	11 0
Equatorial Guinea	...	...	...	
Eritrea	<1 000	<500	<1 000	<2
Ethiopia	39 000	33 000	45 000	9 5
Gabon	<1 000	<1 000	<1 000	<5
Gambia	...	...	...	
Ghana	5 200	4 400	6 200	<1 0
Guinea	...	...	...	
Guinea-Bissau	<1 000	<500	<1 000	<1 0
Kenya	40 000	35 000	45 000	13 0
Lesotho	6 100	5 500	6 600	3 7
Liberia	<1 000	<1 000	<1 000	<5
Madagascar	...	...	...	
Malawi	28 000	25 000	31 000	11 0
Mali	...	...	...	

2001			2012	
lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…
19 000	25 000	14 000	11 000	20 000
2 600	3 700	<1 000	<1 000	1 200
…	…	…	…	…
48 000	70 000	59 000	49 000	70 000
5 600	7 300	<1 000	<500	1 500
…	…	…	…	…
…	…	…	…	…
<500	<1 000	<500	<500	<1 000
67 000	82 000	21 000	19 000	32 000
…	…	…	…	…
3 200	3 900	1 600	1 300	2 000
2 400	3 600	<1 000	<500	1 200
21 000	30 000	15 000	10 000	22 000
37 000	48 000	14 000	8 600	21 000
24 000	30 000	9 400	8 300	11 000
34 000	41 000	9 300	7 000	12 000
…	…	<200	<100	<200
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…
…	…	…	…	…

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	…	…	…	
Iceland	…	…	…	
Ireland	…	…	…	
Israel	…	…	…	
Italy	…	…	…	
Latvia	…	…	…	
Lithuania	…	…	…	
Luxembourg	…	…	…	
Malta	…	…	…	
Netherlands	…	…	…	
Norway	…	…	…	
Poland	…	…	…	
Portugal	…	…	…	
Romania	…	…	…	
Serbia	…	…	…	
Slovakia	…	…	…	
Slovenia	…	…	…	
Spain	…	…	…	
Sweden	…	…	…	
Switzerland	…	…	…	
Turkey	…	…	…	
United Kingdom of Great Britain and Northern Ireland	…	…	…	
GLOBAL	550 000	500 000	620 000	260 0

[1] Estimates for China and India are based on 2011 national estimates.

Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission			Estimated percentage of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child-transmission		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
6 700	5 700	7 700	>95	89	>95
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
5 000	4 200	5 700	>95	85	>95
…	…	…	…	…	…
…	…	…	…	…	…
9 000	5 900	14 000	26	17	42
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
12 000	8 800	17 000	>95	>95	>95
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…

	Number of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child transmission[2]	Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission		
		estimate	lower estimate	upper estimate
Uzbekistan	508	…	…	…
Latin America	14 810	18 000	13 000	26 000
Argentina	1 612	…	…	…
Belize	40	…	…	…
Bolivia (Plurinational State of)	163	…	…	…
Brazil	…	…	…	…
Chile	157	…	…	…
Colombia	854	…	…	…
Costa Rica	37	…	…	…
Ecuador	550	…	…	…
El Salvador	166	…	…	…
Guatemala	252	…	…	…
Guyana	152	…	…	…
Honduras	238	…	…	…
Mexico	773	…	…	…
Nicaragua	141	…	…	…
Panama	187	…	…	…
Paraguay	215	…	…	…
Peru	696	…	…	…
Suriname	107	…	…	…
Uruguay	139	…	…	…
Venezuela (Bolivarian Republic of)	690	…	…	…
Middle East and North Africa	710	8 400	5 900	13 000
Algeria	121			

Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission			Estimated percentage of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child-transmission		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
6 400	**3 600**	**11 000**	**>95**	**55**	**>95**
…	…	…	…	…	…
…	…	…	…	…	…
1 000	**<1 000**	**1 300**	**49**	**38**	**63**
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
<1 000	<1 000	1 100	39	29	51
66 000	**52 000**	**92 000**	**18**	**14**	**25**
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…

	Number of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child transmission[2]	Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission		
		estimate	lower estimate	upper estimate
Lao People's Democratic Republic	49	…	…	…
Malaysia	342	…	…	…
Maldives		…	…	…
Myanmar	2 890	…	…	…
Nepal	110	…	…	…
Pakistan	55	…	…	…
Philippines	19	…	…	…
Singapore		…	…	…
Sri Lanka	5	…	…	…
Thailand	4 918	…	…	…
Viet Nam	1 294	…	…	…
Sub-Saharan Africa	**861 036**	**1 400 000**	**1 200 000**	**1 500 000**
Angola	2 656	15 000	12 000	19 000
Benin	1 349	3 400	2 900	4 000
Botswana	12 207	13 000	11 000	14 000
Burkina Faso	3 582	5 400	4 400	6 700
Burundi	2 742	5 100	3 900	6 500
Cameroon	17 362	27 000	23 000	31 000
Cape Verde	244	…	…	…
Central African Republic	…	…	…	…
Chad	1 680	12 000	10 000	16 000
Comoros	3	…	…	…
Congo	579	3 100	2 700	3 500
Côte d'Ivoire	13 294	20 000	16 000	24 000
Democratic Republic of	4 176	32 000	28 000	37 000

Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission			Estimated percentage of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child-transmission		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…	…
<1 000	<500	<1 000	46	34	69
38 000	32 000	46 000	41	35	49
1 500	1 300	1 900	70	57	87
…	…	…	…	…	…
9 500	7 800	11 000	95	77	>95
6 300	5 000	8 000	44	34	55
2 200	1 600	3 100	33	25	46
86 000	76 000	97 000	53	47	60
16 000	14 000	17 000	58	52	64
<1 000	<1 000	1 300	87	69	>95
…	…	…	…	…	…
68 000	61 000	75 000	60	54	67
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
94 000	81 000	110 000	86	74	>95
8 100	6 700	9 700	94	78	>95
…	…	…	…	…	…
200 000	170 000	230 000	17	15	19
10 000	9 000	12 000	87	75	>95
…	…	…	…	…	…
…	…	…	…	…	…
3 200	2 300	4 800	93	67	>95
280 000	260 000	310 000	83	75	90

	Number of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child transmission[2]	Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission		
		estimate	lower estimate	upper estimate
South Sudan	1 002	7 500	4 600	12 000
Swaziland	10 167	12 000	11 000	13 000
Togo	4 411	5 100	4 200	6 300
Uganda	73 870	100 000	88 000	120 000
United Republic of Tanzania	73 955	97 000	83 000	110 000
Zambia	76 963	79 000	71 000	88 000
Zimbabwe	55 849	68 000	60 000	76 000
Western and Central Europe	**…**	**4 800**	**4 000**	**5 800**
Austria	…	…	…	…
Belgium	…	…	…	…
Bulgaria	…	…	…	…
Croatia	…	…	…	…
Czech Republic	…	…	…	…
Denmark	…	…	…	…
Estonia	…	…	…	…
Finland	…	…	…	…
France	…	…	…	…
Germany	…	…	…	…
Greece	…	…	…	…
Hungary	…	…	…	…
Iceland	…	…	…	…
Ireland	…	…	…	…
Israel	…	…	…	…
Italy	…	…	…	…

Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child-transmission			Estimated percentage of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child-transmission		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
1 500 000	1 300 000	1 600 000	62	57	70

atorregistry.org/node/856. Indicator excludes women who received single-dose nevirapine.
es is based on national Spectrum files. For countries with no national Spectrum file, the values reported in
d.
ational estimates.

	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	Total number of adults and children in the cohort or study who were initiated on antiretroviral therapy
	92	269
	53	93
	83	119
	95	1 497
	75	6 532
	74	665
	33	6
	81	21
	75	32
	92	477
	86	46 170
	88	17
	84	106
	70	345
	79	1 136
	86	435
	81	852
	73	229
	82	530
	74	395
	84	6 555
	90	1 624
	67	264
	80	41 663
	97	343

	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy
Colombia	53
Ecuador	85
El Salvador	87
Guatemala	82
Guyana	81
Honduras	89
Mexico	92
Nicaragua	74
Paraguay	87
Suriname	67
Uruguay	72
Venezuela (Bolivarian Republic of)	94
Middle East and North Africa	
Algeria	89
Bahrain	100
Djibouti	93
Egypt	93
Iran (Islamic Republic Of)	83
Lebanon	85
Morocco	91
Oman	78
Somalia	74
Sudan	64
Tunisia	92
Yemen	80
Oceania	
Fiji	89
New Zealand	100
Palau	100

	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	Total number of adults and children in the cohort or study who were initiated on antiretroviral therapy
	83	1 006
	100	1
	100	30
	91	534
	83	6
	87	3 677
	66	6 085
	86	524
	96	3 236
	86	7
	87	107
	76	80
	82	20 733
	83	7 015
	86	14 927
	91	4 614
	61	3 360
	96	904
	68	10 546
	80	5
	60	16 077
	79	836
	61	500
	83	6 943
	86	1 278
	95	73 339
	72	1 184

	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy
Guinea-Bissau	72
Kenya	92
Lesotho	72
Madagascar	73
Malawi	79
Mali	64
Mauritania	89
Mauritius	72
Mozambique	74
Namibia	83
Niger	75
Nigeria	78
Sao Tome and Principe	77
Seychelles	81
Sierra Leone	70
South Sudan	71
Swaziland	89
Togo	82
Zambia	80
Zimbabwe	85
Western and Central Europe	
Bosnia and Herzegovina	100
Bulgaria	71
Lithuania	95
Montenegro	80
Romania	91
Slovakia	92
The former Yugoslav Republic of Macedonia	93

Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]			Estimated ART coverage based on WHO 2010 guidelines[2]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
120 000	**110 000**	**130 000**	**72**	**67**	**78**
3 700	3 600	3 900	74	72	77
<1 000	<1 000	1 100	>95	>95	>95
3 900	2 900	5 800	>95	>95	>95
27 000	25 000	30 000	78	72	86
65 000	61 000	71 000	63	58	68
15 000	13 000	17 000	68	60	77
7 500	7 200	7 800	72	69	75
350 000	**290 000**	**440 000**	**47**	**39**	**60**
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
510 000	**430 000**	**580 000**	**35**	**30**	**41**
1 300	<1 000	1 800	34	25	48
3 800	3 000	4 800	24	19	31
9 400	8 700	10 000	44	40	48
2 300	1 900	3 100	71	60	>95
…	…	…	…	…	…
2 200	1 600	3 300	20	14	30
7 200	6 100	8 700	28	24	34
…	…	…	…	…	…
3 400	2 200	5 500	27	18	44
100 000	89 000	110 000	39	35	45
11 000	9 200	15 000	31	25	39

	Reported number of adults on ART[3]	Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]		
		estimate	lower estimate	upper estimate
Belize	1 166	1 600	1 500	1 700
Bolivia (Plurinational State of)	2 278	6 300	4 300	9 100
Brazil	307 025	…	320 000	370 000
Chile	18 898	22 000	17 000	29 000
Colombia	33 148	60 000	52 000	82 000
Costa Rica	3 631	5 100	4 800	5 500
Ecuador	9 080	21 000	16 000	32 000
El Salvador	6 308	13 000	10 000	19 000
Guatemala	14 112	27 000	19 000	44 000
Guyana	3 516	3 800	2 400	5 400
Honduras	8 187	14 000	12 000	16 000
Mexico	82 000	100 000	91 000	110 000
Nicaragua	2 086	2 900	2 100	4 200
Panama	5 668	9 200	7 500	11 000
Paraguay	3 606	5 000	3 400	7 600
Peru	27 007	36 000	23 000	74 000
Suriname	1 288	2 000	1 900	2 100
Uruguay	3 928	6 100	5 000	7 700
Venezuela (Bolivarian Republic of)	42 060	59 000	46 000	79 000
Middle East and North Africa	**19 424**	**92 000**	**70 000**	**130 000**
Algeria	3 134	…	…	…
Djibouti	1 442	4 100	3 400	4 800
Egypt	954	2 500	2 300	7 700
Iran (Islamic Republic of)	3 417	27 000	21 000	36 000
Lebanon	536	…	…	…

Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]			Estimated ART coverage based on WHO 2010 guidelines[2]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
9 500	6 800	14 000	15	10	22
…	…	…	…	…	…
<1 000	<1 000	1 200	56	37	83
4 600	2 500	12 000	15	8	42
880 000	**730 000**	**1 100 000**	**91**	**76**	**>95**
…	…	…	…	…	…
…	…	…	…	…	…
28 000	**24 000**	**31 000**	**>95**	**84**	**>95**
…	…	…	…	…	…
<500	<500	<500	42	35	52
…	…	…	…	…	…
13 000	11 000	15 000	84	73	>95
1 800 000	**1 500 000**	**2 300 000**	**52**	**42**	**65**
1 200	<1 000	3 500	9	4	26
2 900	1 300	17 000	27	12	>95
<500	<200	<1 000	11	6	23
54 000	39 000	95 000	82	60	>95
1 000 000	880 000	1 100 000	51	44	57
170 000	120 000	240 000	18	12	25
4 100	3 700	4 700	54	48	61
35 000	28 000	45 000	41	32	52
<100	<100	<100	27	22	35
110 000	95 000	120 000	46	41	51
22 000	19 000	27 000	33	28	40
21 000	13 000	36 000	14	9	25
4 500	3 500	6 400	76	59	>95

	Reported number of adults on ART[3]	Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]		
		estimate	lower estimate	upper estimate
Thailand	232 816	280 000	270 000	300 000
Viet Nam	68 883	120 000	40 000	220 000
Sub-Saharan Africa	**6 991 492**	**10 300 000**	**9 900 000**	**10 900 000**
Angola	39 704	85 000	72 000	100 000
Benin	23 400	34 000	31 000	36 000
Botswana	201 822	200 000	190 000	210 000
Burkina Faso	39 047	54 000	49 000	59 000
Burundi	27 098	40 000	36 000	46 000
Cameroon	117 791	240 000	230 000	260 000
Cape Verde	798	<1 000	<1 000	<1 000
Central African Republic	…	…	…	…
Chad	35 014	82 000	73 000	98 000
Comoros	…	…	…	…
Congo	16 086	36 000	34 000	39 000
Côte d'Ivoire	104 750	190 000	180 000	210 000
Democratic Republic of the Congo	59 468	170 000	160 000	180 000
Equatorial Guinea	6 512	11 000	7 000	17 000
Eritrea	7 608	9 400	8 000	12 000
Ethiopia	270 460	400 000	370 000	430 000
Gabon	14 152	22 000	20 000	24 000
Gambia	3 300	5 600	4 500	6 900
Ghana	66 366	110 000	96 000	120 000
Guinea	25 552	45 000	39 000	52 000
Guinea-Bissau	5 766	14 000	12 000	18 000
Kenya	548 588	680 000	630 000	680 000
Lesotho	87 352	150 000	140 000	160 000

Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]			Estimated ART coverage based on WHO 2010 guidelines[2]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
480 000	470 000	500 000	76	73	79
46 000	40 000	52 000	58	51	66
4 500	3 600	5 700	41	33	52
4 200	3 900	4 800	36	33	40
590 000	540 000	650 000	48	44	53
120 000	110 000	130 000	91	83	>95
20 000	18 000	24 000	55	47	64
1 300 000	1 200 000	1 400 000	36	33	39
110 000	110 000	120 000	94	89	>95
<1 000	<500	<1 000	51	40	66
20 000	18 000	23 000	67	59	75
22 000	18 000	30 000	35	28	47
2 500 000	2 400 000	2 600 000	81	79	86
49 000	34 000	73 000	9	6	13
93 000	89 000	96 000	87	83	90
57 000	51 000	65 000	50	45	57
580 000	530 000	640 000	70	64	78
580 000	540 000	630 000	68	64	74
520 000	500 000	540 000	86	83	91
610 000	590 000	640 000	85	81	88
560 000	**520 000**	**590 000**	**>95**	**94**	**>95**
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…

	Reported number of adults on ART[3]	Estimated number of adults needing antiretroviral therapy based on WHO 2010 guidelines[2]		
		estimate	lower estimate	upper estimate
Finland	…	…	…	…
France	…	…	…	…
Germany	…	…	…	…
Greece	…	…	…	…
Hungary	…	…	…	…
Iceland	…	…	…	…
Ireland	…	…	…	…
Israel	…	…	…	…
Italy	…	…	…	…
Latvia	…	…	…	…
Lithuania	…	…	…	…
Luxembourg	…	…	…	…
Malta	…	…	…	…
Netherlands	…	…	…	…
Norway	…	…	…	…
Poland	…	…	…	…
Portugal	…	…	…	…
Romania	…	…	…	…
Serbia	…	…	…	…
Slovakia	…	…	…	…
Slovenia	…	…	…	…
Spain	…	…	…	…
Sweden	…	…	…	…
Switzerland	…	…	…	…
Turkey	…	…	…	…
United Kingdom of Great Britain and Northern Ireland	…	…	…	…

Estimated number of children needing antiretroviral therapy[3]			Estimated antiretroviral therapy coverage among children[3]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
9 200	8 000	11 000	44	38	50
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
6 700	5 700	7 800	34	29	40
…	…	…	…	…	…
…	…	…	…	…	…
6 400	4 700	8 800	33	24	46
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
12 000	12 000	12 000	75	73	78
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…

	Reported number of children 0-14 years receiving ART[2]	Estimated number of children needing antiretroviral therapy[3]		
		estimate	lower estimate	upper estimate
Latin America	22 661	30 000	25 000	39 000
Argentina	3 000	…	…	…
Belize	95	…	…	…
Bolivia (Plurinational State of)	86	…	…	…
Brazil	6 150	…	…	…
Chile	173	…	…	…
Colombia	6 249	…	…	…
Costa Rica	61	…	…	…
Ecuador	550	…	…	…
El Salvador	335	…	…	…
Guatemala	1 024	…	…	…
Guyana	201	…	…	…
Honduras	783	…	…	…
Mexico	1 800	…	…	…
Nicaragua	104	…	…	…
Panama	256	…	…	…
Paraguay	181	…	…	…
Peru	495	…	…	…
Suriname	84	…	…	…
Uruguay	118	…	…	…
Venezuela (Bolivarian Republic of)	972	…	…	…
Middle East and North Africa	1 011	13 000	8 600	21 000
Algeria	262	…	…	…
Djibouti	40	<1 000	<1 000	<1 000
Egypt	42	…	…	…

Estimated number of children needing antiretroviral therapy[3]			Estimated antiretroviral therapy coverage among children[3]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
1 900	1 300	2 700	92	65	>95
…	…	…	…	…	…
…	…	…	…	…	…
1 800	1 400	2 400	40	31	51
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
1 800	1 400	2 300	39	30	51
130 000	110 000	170 000	43	37	56
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…

	Reported number of children 0-14 years receiving ART[2]	Estimated number of children needing antiretroviral therapy[3]		
		estimate	lower estimate	upper estimate
Nepal	551	…	…	…
Pakistan	139	…	…	…
Philippines	33	…	…	…
Singapore	…	…	…	…
Sri Lanka	24	…	…	…
Thailand	6 274	…	…	…
Viet Nam	3 828	…	…	…
Sub-Saharan Africa	**551 065**	**1 700 000**	**1 600 000**	**1 900 000**
Angola	2 903	19 000	15 000	24 000
Benin	2 635	5 300	4 500	6 200
Botswana	10 261	10 000	9 900	10 000
Burkina Faso	1 878	12 000	9 700	14 000
Burundi	2 023	9 700	7 800	12 000
Cameroon	4 992	33 000	29 000	38 000
Cape Verde	66	…	…	…
Central African Republic	…	…	…	…
Chad	5 842	20 000	17 000	25 000
Comoros	1	…	…	…
Congo	1 148	7 500	6 600	8 500
Côte d'Ivoire	5 620	35 000	29 000	41 000
Democratic Republic of the Congo	4 751	53 000	47 000	61 000
Equatorial Guinea	…	2 100	<1 000	3 600
Eritrea	632	1 900	1 400	2 600
Ethiopia	17 677	78 000	71 000	96 000
Gabon	494	2 000	1 700	2 400

Estimated number of children needing antiretroviral therapy[3]			Estimated antiretroviral therapy coverage among children[3]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
14 000	12 000	17 000	25	20	30
8 300	6 800	10 000	13	11	17
3 300	2 500	4 400	11	8	14
150 000	130 000	180 000	38	34	45
22 000	19 000	24 000	25	22	27
2 100	1 800	2 500	20	17	24
...	...	...	...	...	...
100 000	90 000	110 000	36	33	41
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
100 000	88 000	120 000	27	23	32
13 000	12 000	15 000	88	79	>95
...	...	...	...	...	...
260 000	220 000	290 000	12	11	14
18 000	15 000	21 000	43	36	52
...	...	...	...	...	...
...	...	...	...	...	...
3 000	2 200	4 700	15	11	24
220 000	210 000	250 000	63	57	69
11 000	7 200	17 000	5	3	8
14 000	12 000	15 000	54	49	59
8 800	7 200	11 000	24	19	30
110 000	88 000	130 000	33	28	41
130 000	110 000	150 000	26	22	30
89 000	80 000	99 000	38	35	43

	Reported number of children 0-14 years receiving ART[2]	Estimated number of children needing antiretroviral therapy[3]		
		estimate	lower estimate	upper estimate
Western and Central Europe	...	<1 000	<1 000	<1 000
Austria	...	...	...	...
Belgium	...	...	...	...
Bulgaria	...	...	...	...
Croatia	...	...	...	...
Czech Republic	...	...	...	...
Denmark	...	...	...	...
Estonia	...	...	...	...
Finland	...	...	...	...
France	...	...	...	...
Germany	...	...	...	...
Greece	...	...	...	...
Hungary	...	...	...	...
Iceland	...	...	...	...
Ireland	...	...	...	...
Israel	...	...	...	...
Italy	...	...	...	...
Latvia	...	...	...	...
Lithuania	...	...	...	...
Luxembourg	...	...	...	...
Malta	...	...	...	...
Netherlands	...	...	...	...
Norway	...	...	...	...
Poland	...	...	...	...
Portugal	...	...	...	...
Romania	...	...	...	...

Estimated number of children needing antiretroviral therapy[3]			Estimated antiretroviral therapy coverage among children[3]		
estimate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
…	…	…	…	…	…
1 900 000	1 700 000	2 200 000	34	31	39

atorregistry.org/node/859.
ıg (GARPR) data.

ational estimates.

ome countries[1]

2013		
estimate	lower estimate	upper estimate
41 000	37 000	45 000
130 000	120 000	140 000
25 000	22 000	29 000
900	900	1 000
900	900	1.000
3 000	2 000	4 000
9 000	7 000	11 000
16 000	15 000	18 000
6 000	5 000	8 000
8 000	6 000	11 000
16 000	13 000	19 000
820 000	650 000	1 000 000
11 000	7 000	19 000
220 000	190 000	240 000
26 000	22 000	33 000
91 000	81 000	100 000

guidelines, low- and middle-income countries[1]

	estimate	lower es
Bolivia (Plurinational State of)	13 000	
Brazil		
Chile	36 000	2
Colombia	130 000	10
Costa Rica	9 000	
Ecuador	47 000	3
El Salvador	23 000	1
Guatemala	49 000	3
Guyana	7 000	
Honduras	22 000	1
Mexico	160 000	14
Nicaragua	9 000	
Panama	15 000	1
Paraguay	13 000	
Peru	64 000	4
Suriname	3 000	
Uruguay	11 000	
Venezuela (Bolivarian Republic of)	97 000	7
Middle East and North Africa		
Algeria		
Djibouti	6 000	
Egypt	6 000	
Iran (Islamic Republic of)	63 000	4
Lebanon		
Morocco	26 000	2
Somalia	27 000	1
Sudan	55 000	4
Tunisia	2 000	

ome countries[1]

2013

estimate	lower estimate	upper estimate
700	600	900
22 000	19 000	26 000
4 000	2 000	11 000
7 000	3 000	53 000
900	500	2 000
70 000	52 000	120 000
1 700 000	1 500 000	2 000 000
510 000	350 000	730 000
8 000	7 000	9 000
69 000	54 000	87 000
<100	<100	<100
41 000	34 000	51 000
83 000	52 000	150 000
14 000	11 000	21 000
230 000	190 000	270 000
65 000	60 000	71 000
300 000	290 000	310 000
100 000	89 000	110 000
77 000	68 000	88 000
520 000	480 000	560 000
110 000	96 000	120 000
180 000	160 000	210 000

guidelines, low- and middle-income countries[1]

20

	estimate	lower es
Côte d'Ivoire	380 000	35
Democratic Republic of the Congo	420 000	39
Eritrea	16 000	1
Ethiopia	640 000	59
Gabon	35 000	3
Gambia	12 000	1
Ghana	200 000	18
Guinea	110 000	9
Guinea-Bissau	41 000	3
Kenya	1 300 000	1 30
Lesotho	280 000	27
Liberia	17 000	1
Madagascar	47 000	3
Malawi	950 000	91
Mali	88 000	7
Mauritania	8 000	
Mauritius	9 000	
Mozambique	1 300 000	1 20
Namibia	200 000	18
Niger	39 000	3
Nigeria	3 000 000	2 70
Rwanda	190 000	18
Sao Tome and Principe	1 000	
Senegal	33 000	2
Sierra Leone	49 000	3
South Africa	5 100 000	4 90
South Sudan	140 000	9
Swaziland	170 000	17

ɔme countries[1]

2013		
estimate	lower estimate	upper estimate
1 400 000	1 300 000	1 600 000
1 200 000	1 100 000	1 300 000
970 000	930 000	1 000 000
1 100 000	1 100 000	1 200 000
3 000	2 000	4 000
5 000	4 000	7 000
900	700	1 000
14 000	13 000	16 000
4 000	3 000	6 000
28 600 000	26 500 000	30 900 000

re eligible for antiretroviral therapy: all adults 15+ years with CD4 < 500/ml, all pregnant women living
losis, all HIV discordant couples, and all children living with HIV under five years.

2012		2012
	Costa Rica[1]	38
100	Ecuador[1]	69
59	El Salvador	89
67	Guatemala[1]	16
94	Guyana	84
50	Honduras	51
0	Mexico	19
29	Nicaragua[1]	58
35	Panama[1]	97
100	Paraguay	50
63	Suriname	53
29	Uruguay	23
	Venezuela (Bolivarian Republic of)	43
47	**Middle East and North Africa**	
27	Algeria[1]	31
	Bahrain	8
100	Djibouti	15
45	Iran (Islamic Republic Of)	40
55	Lebanon	7
52	Morocco	61
20	Oman	100
41	Qatar	100
30	Somalia	6
22	Sudan	1
92	Tunisia	8
23	Yemen[1]	10
	Oceania	
73	Fiji	100
38	New Zealand[1]	100
57	Papua New Guinea	30

2012		2012
	Bangladesh	26
100	Brunei Darussalam	100
59	Cambodia	47
67	India	20
94	Indonesia[1]	56
50	Lao People's Democratic Republic[1]	56
0	Malaysia	19
29	Maldives	0
35	Myanmar	22
100	Nepal	20
63	Pakistan	1
29	Sri Lanka	65
	Thailand	30
47	Viet Nam	24
27	**Sub-Saharan Africa**	
	Angola	21
100	Benin[1]	11
45	Botswana	49
55	Burkina Faso	31
52	Burundi	24
20	Cameroon	22
41	Cape Verde	62
30	Central African Republic	5
22	Chad	15
92	Comoros	40
23	Congo	4
	Côte d'Ivoire	30
73	Democratic Republic of the Congo	14
38	Equatorial Guinea[1]	62
57	Ethiopia	35

2012	
	Ghana
100	Guinea
59	Kenya
67	Lesotho
94	Liberia
50	Madagascar
0	Malawi
29	Mali
35	Mauritania[1]
100	Mauritius
63	Mozambique
29	Namibia
	Niger[1]
47	Nigeria
27	Rwanda[1]
	Sao Tome and Prin
100	Senegal
45	Seychelles
55	Sierra Leone
52	South Africa
20	South Sudan
41	Swaziland
30	Togo
22	Uganda
92	United Republic o
23	Zambia
	Western and Cen
73	Romania
38	Serbia
57	Slovakia

2012		2012
	Bolivia (Plurinational State of)	164
2	Brazil	9 049
5	Chile[1]	2
1	Colombia	474
51	Costa Rica[1]	24
0	Ecuador[1]	583
268	El Salvador	178
0	Guatemala[1]	243
1 252	Guyana	168
14	Honduras	192
0	Mexico	298
1	Nicaragua[1]	58
6	Panama[1]	224
24	Paraguay	121
	Peru	847
3 454	Suriname	25
3	Uruguay	32
	Venezuela (Bolivarian Republic of)	517
55	**Middle East and North Africa**	
63	Algeria[1]	110
153	Bahrain	1
26	Djibouti	83
51	Egypt	17
118	Iran (Islamic Republic of)	117
103	Iraq	1
78	Jordan	0
4 433	Kuwait	3
103	Lebanon	3
	Morocco	357
19	Oman	14

2012		2012
	Somalia	51
	Sudan	40
	Syrian Arab Republic	5
	Tunisia	14
	United Arab Emirates[1]	12
	Yemen[1]	16
	Oceania	
	Fiji	3
	Kiribati	0
	Marshall Islands	0
	Micronesia (Federated States of)	0
	New Zealand[1]	3
	Palau	0
	Papua New Guinea	325
	Samoa	0
	Solomon Islands	0
	Tonga	0
	Tuvalu	0
	Vanuatu	0
	South and South-East Asia	
	Afghanistan	5
	Bangladesh	63
	Brunei Darussalam	2
	Cambodia	1 268
	India	25 790
	Indonesia[2]	4 209
	Lao People's Democratic Republic[1]	263
	Malaysia	434
	Maldives	0
	Myanmar	4 270

Pakistan
Sri Lanka
Thailand
Timor-Leste
Viet Nam
Sub-Saharan Afric
Angola
Benin[1]
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Re
Chad
Comoros
Congo
Côte d'Ivoire
Democratic Repub
Equatorial Guinea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar

2012
425
14
9
15 391
3 362
516
10 866
1 395
18
561
3
931
101 937
147
3 762
476
9 962

	2012
United Republic of Tanzania	10 993
Zambia	14 471
Western and Central Europe	
Albania	7
Andorra	0
Bulgaria	3
Estonia	28
Greece[1]	28
Iceland	0
Latvia	65
Montenegro	0
Romania	205
Serbia	6
Slovakia	0
Slovenia	0
The former Yugoslav Republic of Macedonia	0
Turkey	35

3, unless otherwise specified.

nse Progress Reporting (GARPR) 2013.
es. TB programme data was partial, hence, AIDS programme data was used.

	2004			2012	
imate	lower estimate	upper estimate	estimate	lower estimate	upper estimate
780	660	900	1 300	1 100	1 400
3 000	2 600	3 700	930	740	1 100
1 300	1 100	1 500	470	400	540
2 600	2 200	3 000	850	700	1 000
3 100	2 700	3 500	560	410	700
2 000	11 000	14 000	7 700	6 500	9 300
3 700	7 600	10 000	2 400	2 000	2 900
1 900	1 700	2 300	1 400	1 200	1 700
1 300	1 000	1 500	1 000	820	1 200
9 800	8 400	11 600	2 500	2 200	3 100
6 700	5 600	8 500	6 300	5 500	8 100
230	190	260	150	120	170
7 000	21 000	35 000	5 600	4 600	7 300
2 600	2 400	3 200	540	490	630
6 000	12 000	18 000	7 700	6 600	8 900
1 400	910	1 900	1 500	1 300	1 900
4 000	12 000	16 000	3 500	3 100	4 300
610	520	730	360	310	420
4 000	28 000	41 000	45 000	35 000	53 000
9 800	8 600	12 000	1 600	1 300	2 000
9 000	22 000	65 000	19 000	11 000	25 000
4 100	3 600	4 900	740	600	920
1 000	880	1 200	2 000	1 600	2 200
9 000	88 000	120 000	88 000	75 000	100 000
2 100	1 900	2 500	2 100	1 900	2 500
3 100	2 500	3 700	4 300	4 000	5 100
490	410	570	380	310	440
6 000	21 000	29 000	9 200	8 000	12 000
1 000	9 200	13 000	7 000	5 800	8 000

2010	2011	2012
300 777	326 796	297 612
58 593 535	60 633 504	...
223 664	223 664	...
5 521	182 713	...
1 608 233	1 608 233	...
3 848 958	...	...
2 508 745	1 267 636	615 427
497 309 403	529 376 000	554 007 385
1 009 600	1 070 420	...
950 996	1 169 128	...
1 961 038	2 079 270	1 090 732
6 857 540	8 563 409	...
13 246 041	9 668 805	...
4 362 929	4 562 010	4 545 234
...	30 346 857	30 352 251
1 407 901	1 441 565	3 886 526
4 617 721	5 125 529	2 381 845
1 718 968	2 269 834	...
38 054 198	...	...
16 985 205	12 636 531	13 334 449
1 134 649	...	...
...	2 276 663	...
745 830 717	...	...
119 224 642	123 044 300	132 689 469
86 962 224	102 516 422	...

	2010	20
Costa Rica	24 765 744	
Ecuador	24 270 868	
El Salvador	37 297 450	
Guatemala	28 765 245	
Honduras	16 025 455	
Nicaragua	9 682 304	
Panama	15 702 066	
Paraguay	2 677 348	2 50
Peru	15 445 506	
Suriname	1 939 620	2 24
Venezuela (Bolivarian Republic of)	109 037 329	80 35
Middle East and North Africa		
Algeria	5 345 581	8 25
Djibouti	627 309	59
Jordan	1 000 000	1 00
Lebanon	1 570 000	1 57
Morocco	6 357 832	6 72
Syrian Arab Republic	...	62
Tunisia	110 040	11
Yemen	442 233	46
Oceania		
Fiji	419 594	46
Marshall Islands	200 027	12
Palau	394 323	39
Papua New Guinea	12 077 392	
Samoa	161 694	17
Solomon Islands	150 032	15
Tuvalu	12 000	2
Vanuatu	36 510	3

2010	2011	2012
200 000	...	24 250
1 202 508	746 225	977 247
...	5 644 947	5 671 862
27 577 082	...	...
827 689	827 689	...
31 383 249	36 668 151	54 416 987
2 596 875	3 944 294	...
4 768 321	...	...
3 372 467	4 126 663	...
2 277 815	...	...
200 251 009	267 932 277	...
21 431 087	...	...
15 877 187	21 462 786	...
6 937 649	7 796 210	11 467 748
262 400 227	299 022 611	...
11 118 571	...	...
1 774 303	2 034 615	1 358 187
14 395 254	...	...
499 368	522 275	17 194
1 873 217	1 887 321	...
3 862 235	2 766 010	6 212 969
169 643	936 323	174 303
8 104 228	...	...
2 759 539	...	...
6 166 691	6 423 890	12 297 465
8 087 144	14 854 634	...
317 576	638 185	2 302 175

	2010	20
Guinea-Bissau	611 774	
Kenya	134 682 271	162 56
Liberia	83 100	19
Madagascar	4 473 518	6 47
Mali	6 502 189	
Mauritania	698 854	3 72
Mauritius	4 894 627	
Namibia	168 791 097	
Niger	69 420	8
Nigeria	125 139 587	
Sao Tome and Principe	7 803	11
Senegal	...	2 70
Seychelles	2 297 113	2 00
Togo	8 878 290	4 07
Zimbabwe	20 833 554	28 06
Western and Central Europe		
Bulgaria	4 252 150	6 66
Latvia	5 996 109	7 19
Lithuania	...	3 60
Romania	91 512 275	102 45
Serbia	...	
The former Yugoslav Republic of Macedonia	2 366 290	
Turkey	...	

Multilaterals

	UN Agencies			Global Fund		
2012	2010	2011	2012	2010	2011	2012
...	6 866	6 866	3 509	233 300	37 290	21 542
...	...	...	...	8 261 407	9 321 423	...
...	1 178	34 666	...	14 839	11 355	...
...	13 250 596	50 569 566	...	21 587 726	8 607 148	...
...	258 577	...	...	9 680 362	...	...
...	33 512	...	8 765	116 050	82 558	92 267
3 319 375	5 675 752	2 935 759	602 155	40 436 517	27 664 861	64 216 671
...	5 000	75 000	...	...	...	...
...	126 671	188 352	126 960	2 885 885	3 227 460	3 561 135
...	171 014	152 855	...	616 197	5 416 440	...
...	238 119	266 925	...	5 946 198	9 778 974	...
1 112 293	212 468	401 494	307 243	5 300 330	5 146 960	8 783 691
...	...	338 007	120 714	...	5 151 157	6 961 187
...	1 753 560	905 000	1 371 130	5 836 715	2 152 922	6 759 253
139 249	403 777	979 690	303 987	5 302 443	7 161 464	6 213 396
...	537 086	743 891	...	9 825 871	8 815 922	...
...	1 758 678	...	...	26 858 256	...	...
...	468 000	468 000	848 538	6 045 177	6 045 177	9 923 281
...	280 346	...	...	...	...	...
...	...	499 221	...	...	4 799 828	...
...	7 468 124	...	...	...	...	...
...	411 244	...	...	...	...	...

Multilaterals

	Development Banks			Other multilaterals		
	2010	2011	2012	2010	2011	2012
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	48 982	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	718 655	...	...	...	720 147
	...	...	...	25 418 125	15 706 811	...
	...	...	...	...	...	...
	...	...	...	...	...	19 891
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	9 133	188
	1 517 507	551 780	...	400 000	350 000	...
	...	...	...	...	...	...
	...	...	...	586 650	720 935	...
	...	...	...	183 024	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...

Multilaterals

	UN Agencies			Global Fund		
2012	2010	2011	2012	2010	2011	2012
...	1 336 249	...	...	26 364	...	...
2 758 436	273 174	...	575 666	7 451 451	...	9 301 591
3 401 047	1 569 879	...	1 159 823	5 661 421	...	12 312 352
...	1 344 386	...	...	8 010 681	...	...
...	2 113 283	...	...	9 155 592	...	...
...	318 962	739 922	...	3 588 531	4 115 637	...
...	403 751	...	...	7 278 840	...	...
...	73 872	67 700	...	1 485 037	1 009 894	...
...	626 411	133 327	...	...	...	...
180 195	180 699	319 371	609 511	...	...	...
143 655	1 971 916	1 597 164	1 137 495	1 358 827	1 975 708	1 574 418
...	...	...	...	723 768	433 831	968 902
56 618	881 906	742 118	826 517	4 811 881	4 190 951	4 667 574
...	...	189 850	...	...	...	...
...	...	...	...	2 928 100	2 615 149	...
...	923 775	461 636	...	...	351 385	...
...	339 790	653 830	335 118	72 512	206 829	...
...	...	...	...	424 106	83 959	134 298
95 250	...	...	...	118 457	83 557	34 991
296 349	68 898	...	...	115 772	86 810	96 236
...	2 495 709	...	...	4 572 622	...	...
...	95 536	29 583	...	82 661	102 625	...
...	44 612	17 436		...	...	...
...	...	...	...	43 641	121 916	...
...	38 888	28 769	...	177 211	328 393	175 692

Multilaterals

	Development Banks			Other multilaterals		
	2010	2011	2012	2010	2011	2012
	...	...	...	727 674	...	...
	...	...	46 916	645 969	...	198 784
	63 778	...	...	162 901	...	...
	...	...	...	42 406	...	...
	11 892	...	...	91 960	...	...
	2 268	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	28 249	...	...	...	...	105 812
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	43 333	...	...	853 432	587 591	...
	...	...	19 692	5 694	174 929	185 287
	...	...	...	...	...	...
	...	...	...	71 645	96 066	54 103
	2 607 197	...	...	74 194	...	...
	...	...	...	...	...	...
	...	...	...	...	167 661	...
	4 000	...	...	...	...	...
	...	...	...	510 411	49 077	20 692

Multilaterals

	UN Agencies			Global Fund		
2012	2010	2011	2012	2010	2011	2012
...	849 942	1 172 183	27 092	1 774 255	1 645 560	1 829 829
3 785 791	232 797	202 846	546 436	10 461 394	12 389 199	6 875 780
15 872 474		7 128 857	4 320 352		18 030 595	20 027 132
...	...	...	...	...	...	...
...	972 646	934 476	...	4 357 227	7 562 540	...
...	561 880	307 629	...	...	2 232 176	1 725 292
...	...	...	...	...	...	...
...	3 996 848	...	...	388 442	...	...
...	1 007 266	1 171 076	...	3 278 792	1 955 077	...
...	1 046 040	...	...	267 529	...	...
...	1 473 326	1 488 538	...	26 021 888	35 359 954	...
...	1 343 508	...	...	6 650 517	...	...
...	3 879 748	894 705	...	8 199 031	263 478	...
2 970 320	3 228 966	3 071 804	1 727 806	2 368 720	11 669 947	12 766 641
...	2 028 440	2 723 550	...	...	...	...
...	7 264 617	...	...	13 963 876	...	...
8 500 000	...	544 314	1 032 781	...	14 145 538	11 365 873
...	3 562 002	...	...	17 134 894	...	...
...	149 724	94 703	759	1 711 088	2 853 473	16 002
...	8 055 827	7 063 516	...	3 979 986	6 189 238	...
311 178	2 142 046	3 036 244	3 209 744	1 705 808	8 225 860	5 247 126
...	...	...	72 309	...	...	1 233 403
...	337 139	...	...	6 354 280	...	...
...	16 480 566	...	...	30 107 409	...	...
...	578 116	1 124 598	2 005 277	1 288 011	915 788	...

Multilaterals

	Development Banks			Other multilaterals		
	2010	2011	2012	2010	2011	2012
	1 523 129	3 728 220	2 080 692	...	...	...
	...	1 690 130	...	...	...	2 577
	...	...	...	...	1 745 621	1 165 243
	...	...	...	28 193 858	...	...
	163 594	231 690	...	250 914	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	284 301	...	...	380 983	...	...
	...	...	...	...	24 881	...
	...	...	...	568 614	...	...
	54 915	120 790	...	...	...	...
	8 001 304	...	...	1 517 166	...	...
	...	126 898	...	2 051 653	1 327 135	...
	1 613 734	320 288	...	...	159 011	698 521
	...	...	...	297 015	331 272	...
	24 081	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	...	...	...	...	...	...
	661 033	...	82 871	522 711	4 631 043	...
	...	...	...	...	...	47 590
	807 570	...	...	...	...	...
	26 737 388	...	...	163 387	...	...
	...	643 284	...	...	...	...

Multilaterals

	UN Agencies			Global Fund		
2012	2010	2011	2012	2010	2011	2012
1 135 908	1 780 330	1 355 255	4 897 526	1 463 210	4 611 586	773 945
...	687 951	...	...	...	...	...
...	...	7 620 359	...	15 266 186	20 864 464	...
...	2 763 451	7 588 885	...	25 511 143	22 804 922	...
1 433 205	1 417 801	1 540 707	1 349 969	1 485 034	4 475 148	2 463 869
...	450 946	...	...	14 931 689	...	...
...	247 500	291 600	281 450	...	69 957	3 036 125
...	291 226	...	...	1 675 382	...	...
...	7 860 111	...	...	9 324 333	...	...
3 581 728	581 263	5 987 007	3 869 274	9 493 223	5 824 701	2 926 358
...	18 410 698	...	...	65 899 650	...	...
225 477	259 461	273 686	14 924	260 248	294 122	82 727
...	...	375 212	...	...	14 800 499	...
...	17 581	53 040	170 405	...	...	...
4 794 200	1 506 109	1 499 068	1 535 628	6 937 675	10 670 960	3 476 107
91 023 382	17 972 300	27 240 021	5 446 365	66 042 408	26 233 338	107 083 627
...	81 000	95 000	...	5 494 807	6 382 691	...
...	146 569	25 228	...	...	...	...
...	...	...	...	...	...	...
...	660 616	716 706	20 000	1 417 679	...	...
115 171	...	...	198 435	...	...	3 859 000
...	462 347	...	...	1 723 215	...	...

Multilaterals

Development Banks			Other multilaterals		
2010	2011	2012	2010	2011	2012
...	...	88 996	...	...	878 754
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	21 246	...	...	15 391	...
8 018 577	...	...	109 648	...	...
...	...	...	...	...	...
...	...	...	202 511	...	...
...	...	...	...	...	...
...	2 689	284 548	231 782	14 301	32 525
1 505 746	...	...	45 762	...	...
43 656	118 046	...	...	...	...
...	...	...	...	186 494	...
24 104	...	...	3 827	13 174	...
...	...	...	...	1 015 344	1 091 481
30 000	...	...	16 724 223	32 791 644	84 770
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
1 771 480	4 577 421	...	56 078	203 467	...
...	...	...	...	...	36 920
...	...	...	...	...	...

2010	2011	2012
1 361 858	617 262	987 161
66 854 940	69 954 928	...
223 664	223 664	...
93 501	286 803	...
166 132 144	209 009 280	...
14 620 864	...	...
3 991 280	2 836 345	1 436 605
583 626 880	589 373 504	630 628 800
1 014 600	1 145 420	...
3 501 188	3 731 466	...
5 045 789	5 580 436	5 329 710
8 236 251	14 555 704	...
19 722 982	19 864 484	...
11 195 893	13 083 921	15 609 576
...	36 887 020	37 809 896
11 235 261	5 720 845	13 399 289
10 720 936	13 644 548	9 092 261
15 233 122	15 302 037	...
71 931 928	...	...
23 663 618	19 149 708	24 106 268
2 547 545	...	...
...	9 251 710	...
754 998 080	...	...
119 693 168	123 427 472	133 128 856
87 237 816	104 688 656	10 671 901
26 944 640	...	...

	2010	20
Ecuador	27 246 408	
El Salvador	48 752 880	
Guatemala	41 650 940	
Honduras	31 741 800	
Nicaragua	23 744 276	
Panama	17 229 700	
Paraguay	9 444 684	7 60
Peru	27 919 674	
Suriname	6 045 606	4 59
Venezuela (Bolivarian Republic of)	109 663 744	80 48
Middle East and North Africa		
Algeria	5 816 047	9 13
Djibouti	5 046 034	4 29
Jordan	1 723 768	1 43
Lebanon	2 420 000	2 42
Morocco	13 456 936	13 11
Syrian Arab Republic	...	80
Tunisia	3 038 140	2 74
Yemen	2 210 998	1 61
Oceania		
Fiji	2 096 989	2 25
Kiribati	429 800	25
Marshall Islands	390 933	22
Micronesia (Federated States of)	521 806	47
Palau	982 489	1 04
Papua New Guinea	50 899 064	
Samoa	345 028	30
Solomon Islands	804 327	90
Tuvalu	59 641	17
Vanuatu	1 661 523	1 88

2010	2011	2012
4 437 825	8 002 074	4 638 399
15 114 988	18 647 130	12 394 502
...	52 254 696	49 970 564
68 801 200	...	...
8 579 739	11 744 135	...
31 945 130	39 207 956	56 142 280
40 501 040	46 293 476	...
12 932 295	...	...
8 375 187	7 998 805	...
4 312 212	...	...
236 177 680	314 362 656	...
123 652 864	...	...
34 064 912	33 477 540	...
18 197 534	27 076 904	29 821 530
363 069 632	390 416 544	...
50 116 464	...	...
41 682 508	25 443 438	22 256 840
55 311 540	...	...
2 545 213	3 595 435	33 955
14 897 398	15 673 308	...
11 791 489	18 834 284	15 893 491
169 643	936 324	1 527 605
16 472 586	...	...
105 197 360	...	...
8 522 748	10 028 093	14 302 741
56 102 624	75 662 576	...
11 424 371	14 777 291	11 788 635
5 258 837	...	...
726 058 624	745 551 808	...

	2010	20
Liberia	28 357 694	31 12
Madagascar	9 411 533	14 94
Malawi	65 560 000	77 39
Mali	36 518 056	
Mauritania	946 354	4 08
Mauritius	7 258 547	
Namibia	279 004 192	
Niger	14 180 564	15 65
Nigeria	496 066 912	
Sao Tome and Principe	605 751	88
Senegal	...	22 51
Seychelles	2 354 608	2 06
Togo	22 391 016	19 61
Zimbabwe	184 952 736	204 09
Western and Central Europe		
Bulgaria	9 892 606	13 14
Latvia	6 168 667	7 28
Lithuania	...	3 66
Romania	95 508 032	108 13
Serbia	...	
The former Yugoslav Republic of Macedonia	4 722 972	
Turkey	...	

[1] For the indicator definition, go to http://www.indicatorregistry.org/node/861.

Comprehensive correct knowledge about AIDS among young people aged 15-24 (2 ways to prevent AIDS and reject 3 misconceptions)[1] (%)

Year, Source	Females	Males
2007, DHS	40.8	33.7
2005–06, DHS	33.9	40.1
2005, DHS	22.6	15.1
2006, DHS	4.8	5.3
2007, DHS	44.8	42.8
2008, DHS	22.4	27.7
2011, MICS	42.9	0
2010, DHS	24.1	0
2009, DHS	54.1	46.6
2005–06, DHS	29.7	0
2001, DHS	22.2	0
2005, DHS	4.4	0
2007, DHS	12.5	5.0
2003–04, DHS	11.7	0
2010, DHS	44.4	43.7
2005–06, NFHS	19.9	36.1
2011, DHS	25.8	33.9
2009, DHS	12.2	19.7
2005, PAIS	42.3	50.3
2006, DHS	8.4	14.2
2010, DHS	31.1	35.7
2010, DHS	44.5	46.5

Comprehensiv young people reject 3 misco

	Year, Source	Fem
Cameroon	2011, MICS	28.
Cape Verde	2012, AIDS	90.
Congo	2009, AIS	8.
Democratic Republic of the Congo	2007, DHS	15.
Eritrea	2012, DHS	24.
Ethiopia	2011, DHS	23.
Kenya	2008–09, DHS	46.
Gabon	2012, DHS	28.
Lesotho	2009, DHS	38.
Madagascar	2008–09, DHS	22.
Malawi	2010, DHS	41.
Mozambique	2011, DHS	30.
Namibia	2006, DHS	59.
Niger	2006, DHS	13.
Nigeria	2008, DHS	22.
Rwanda	2010–11, DHS	52.
Sao Tome and Principe	2008–09, DHS	42.
Senegal	2010–11, DHS	29.
Sierra Leone	2008, DHS	17.
Swaziland	2006–07, DHS	52.
United Republic of Tanzania	2010, DHS	48.
Uganda	2006, DHS	31.
Zambia	2007, DHS	34.
Zimbabwe	2010–11, DHS	51.
Western and Central Europe		
Albania	2008–09, DHS	35.
Bosnia and Herzegovina	2012, MICS	47.
Montenegro	2012, AIDS	22.

mate partner in the past 12 months[1]

2012[2]		2012[2]
	Timor-Leste	29
12	**Sub-Saharan Africa**	
16	Angola	29
10	Burkina Faso	9
	Cameroon	51
10	Central African Republic	40
	Chad	30
10	Côte d'Ivoire	31
25	Democratic Republic of the Congo	59
	Gabon	45
24	Ghana	19
8	Guinea	23
28	Guinea-Bissau	40
15	Kenya	32
17	Liberia	35
22	Madagascar	9
15	Malawi	22
14	Mauritius	23
	Nigeria	15
15	Rwanda	44
16	Sao Tome and Principe	26
	Sierra Leone	10
25	Swaziland	8
60	Togo	22
	United Republic of Tanzania	35
22	Zimbabwe	27
10	**Western and Central Europe**	
14	Czech Republic	11

atorregistry.org/node/863.

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
120 000	150 000	120 000	110 000	140 000
2 600	2 800	3 500	3 300	3 700
<500	<500	<500	<500	<500
<500	<500	<1 000	<1 000	1 500
27 000	35 000	22 000	19 000	26 000
71 000	90 000	78 000	70 000	88 000
11 000	15 000	9 300	7 800	11 000
4 600	5 800	7 300	6 800	8 000
74 000	140 000	250 000	180 000	350 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
280 000	450 000	430 000	340 000	550 000
<100	<500	<1 000	<500	<1 000
<500	<1 000	1 100	<1 000	1 500
1 900	3 300	7 100	6 400	8 000
<500	<1 000	1 400	1 100	2 000
...	...	...	...	...
<500	<1 000	1 600	1 100	2 300
2 900	4 800	6 500	5 300	8 200
...	...	...	...	...
<200	1 600	4 100	2 300	8 400
65 000	87 000	95 000	80 000	110 000
5 000	11 000	7 200	5 400	10 000
330 000	440 000	430 000	350 000	550 000
17 000	29 000	32 000	26 000	37 000

	2001			
	estimate	lower estimate	upper estimate	estim
Bolivia (Plurinational State of)	5 100	3 700	7 400	4
Brazil	...	130 000	170 000	
Chile	4 100	1 800	6 900	5
Colombia	39 000	29 000	52 000	42
Costa Rica	2 400	2 300	2 600	4
Ecuador	7 800	4 200	12 000	12
El Salvador	8 800	6 400	13 000	9
Guatemala	19 000	12 000	30 000	20
Guyana	1 500	<1 000	2 400	3
Honduras	17 000	14 000	21 000	9
Mexico	39 000	32 000	47 000	38
Nicaragua	<500	<200	<1 000	2
Panama	5 800	4 800	7 100	5
Paraguay	1 200	<1 000	4 000	5
Peru	27 000	19 000	36 000	23
Suriname	1 600	1 300	1 900	2
Uruguay	1 700	1 200	2 600	2
Venezuela (Bolivarian Republic of)	26 000	17 000	40 000	38
Middle East and North Africa	62 000	41 000	110 000	100
Algeria	...	...	...	
Djibouti	5 000	3 900	6 000	3
Egypt	<1 000	<500	1 100	1
Iran (Islamic Republic of)	1 200	<1 000	2 300	19
Lebanon	...	...	...	
Morocco	4 400	3 100	5 700	11
Oman	...	...	...	
Somalia	12 000	7 000	19 000	13

2001		2012		
lower estimate	upper estimate	estimate	lower estimate	upper estimate
<200	<1 000	<1 000	<500	1 100
<1 000	2 400	7 700	3 600	19 000
150 000	230 000	260 000	190 000	380 000
...	...	...	...	...
...	...	...	...	...
11 000	19 000	18 000	15 000	21 000
...	...	...	...	...
<100	<200	<500	<500	<500
...	...	...	...	...
7 700	16 000	12 000	10 000	16 000
960 000	1 500 000	1 400 000	1 100 000	1 800 000
<500	1 700	1 400	<1 000	4 600
<100	1 300	2 700	1 000	28 000
<100	<100	<500	<200	<1 000
34 000	99 000	39 000	26 000	76 000
660 000	930 000	750 000	610 000	940 000
<100	80 000	230 000	150 000	370 000
1 100	2 700	4 900	4 200	5 600
3 400	7 300	12 000	8 500	16 000
<100	<100	<100	<100	<100
42 000	54 000	63 000	55 000	71 000
12 000	18 000	14 000	12 000	19 000
1 600	4 800	24 000	14 000	44 000
1 300	4 600	2 200	1 700	3 200
...	...	...	...	...
<500	<1 000	<1 000	<1 000	1 500
190 000	230 000	200 000	180 000	210 000

	2001			
	estimate	lower estimate	upper estimate	estim
Sub-Saharan Africa	11 100 000	10 300 000	12 000 000	12 900
Angola	67 000	50 000	98 000	130
Benin	33 000	29 000	37 000	37
Botswana	160 000	150 000	170 000	180
Burkina Faso	84 000	72 000	98 000	55
Burundi	62 000	52 000	75 000	43
Cameroon	260 000	240 000	280 000	310
Cape Verde	<1 000	<500	<1 000	<
Central African Republic	...	...	...	
Chad	97 000	82 000	110 000	100
Comoros	...	...	...	
Congo	44 000	40 000	50 000	36
Côte d'Ivoire	320 000	280 000	360 000	220
Democratic Republic of the Congo	210 000	190 000	240 000	230
Equatorial Guinea	6 100	3 300	11 000	16
Eritrea	16 000	11 000	21 000	8
Ethiopia	700 000	630 000	770 000	380
Gabon	28 000	24 000	32 000	25
Gambia	3 900	2 900	5 200	7
Ghana	140 000	120 000	160 000	120
Guinea	35 000	29 000	43 000	63
Guinea-Bissau	11 000	7 800	15 000	21
Kenya	790 000	750 000	840 000	820
Lesotho	150 000	140 000	160 000	190
Liberia	18 000	15 000	21 000	11
Madagascar	23 000	19 000	28 000	23
Malawi	530 000	490 000	560 000	560
Mali	56 000	45 000	70 000	50

2001			2012	
lower estimate	upper estimate	estimate	lower estimate	upper estimate
1 800	2 300	2 800	2 500	3 200
400 000	520 000	810 000	730 000	930 000
80 000	110 000	120 000	100 000	130 000
22 000	32 000	20 000	16 000	25 000
1 200 000	1 600 000	1 700 000	1 500 000	1 900 000
100 000	130 000	100 000	95 000	120 000
<500	<1 000	<1 000	<500	<1 000
13 000	19 000	24 000	20 000	29 000
10 000	20 000	31 000	22 000	44 000
2 200 000	2 600 000	3 400 000	3 200 000	3 600 000
29 000	110 000	78 000	51 000	120 000
71 000	83 000	110 000	100 000	120 000
59 000	83 000	65 000	56 000	76 000
410 000	540 000	780 000	690 000	900 000
670 000	830 000	730 000	660 000	810 000
370 000	430 000	490 000	460 000	530 000
880 000	1 000 000	700 000	660 000	740 000
120 000	150 000	210 000	190 000	230 000
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...

	2001			
	estimate	lower estimate	upper estimate	estim
Hungary	...	...	...	
Iceland	...	...	...	
Ireland	...	...	...	
Israel	...	...	...	
Italy	...	...	...	
Latvia	...	...	...	
Lithuania	...	...	...	
Luxembourg	...	...	...	
Malta	...	...	...	
Netherlands	...	...	...	
Norway	...	...	...	
Poland	...	...	...	
Portugal	...	...	...	
Romania	...	...	...	
Serbia	...	...	...	
Slovakia	...	...	...	
Slovenia	...	...	...	
Spain	...	...	...	
Sweden	...	...	...	
Switzerland	...	...	...	
Turkey	...	...	...	
United Kingdom of Great Britain and Northern Ireland	...	...	...	
GLOBAL	13 700 000	12 500 000	15 000 000	16 100

[1] Estimates for China and India are based on 2011 national estimates.

	2013
	No
	No
	Yes
	No
	Yes
	No
	No
	No
	No
	No
	No
	Yes
	No
	No
	No
	No
	No
	Yes
	No
	No
	No
	No
	Yes
	Yes
	Yes
	No
	Y

	2009	2013
Latin America		
Argentina	No	No
Belize	Yes	Yes
Brazil	No	No
Chile	No	No
Colombia	No	No
Costa Rica	No	No
Ecuador	Yes	No
El Salvador	No	No
Guatemala	No	No
Guyana	No	No
Mexico	No	No
Nicaragua	Yes	Yes
Panama	No	No
Paraguay	Yes	Yes
Peru	No	No
Uruguay	No	No
Venezuela (Bolivarian Republic of)	No	No
Middle East and North Africa		
Bahrain	Yes	Yes
Djibouti	No	No
Egypt	Yes	Yes
Iran (Islamic Republic of)	No	No
Iraq	Yes	Yes
Jordan	Yes	Yes
Kuwait	Yes	Yes
Lebanon	Yes	Yes
Libya	No	No
Morocco	No	No
Oman	Yes	Yes
Qatar	Yes	Yes

	2009	2013
Saudi Arabia	Yes	Yes
Somalia	No	No
Sudan	Yes	Yes
Syrian Arab Republic	Yes	Yes
Tunisia	No	No
United Arab Emirates	Yes	Yes
Yemen	Yes	Yes
North America		
Canada	No	No
United States of America	No	No
Oceania		
Australia	Yes	Yes
Fiji	Yes	No
Marshall Islands	Yes	Yes
Micronesia (Federated States of)	No	No
New Zealand	Yes	Yes
Papua New Guinea	Yes	Yes
Samoa	Yes	Yes
Solomon Islands	Yes	Yes
Tonga	Yes	Yes
Vanuatu	No	No
South and South-East Asia		
Bangladesh	No	No
Brunei Darussalam	Yes	Yes
Cambodia	No	No
India	Yes	No
Indonesia	No	No
Lao People's Democratic Republic	No	No
Malaysia	Yes	Yes
Maldives	No	No

Myanmar
Nepal
Pakistan
Philippines
Singapore
Sri Lanka
Thailand
Viet Nam
Sub-Saharan Afr
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Central African R
Chad
Comoros
Congo
Côte d'Ivoire
Democratic Repu of the Congo
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar

	2013
	No
	No
	No
	Yes
	No
	No
	No
	No
	No
	No
	No
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	No
	No
	No
	Yes
	No
	No
	No
	No
	No
	Yes
	No
	No
	No
	No
	No

	2009	2013
Greece	No	No
Hungary	No	No
Iceland	No	No
Ireland	No	No
Israel	Yes	Yes
Italy	No	No
Latvia	No	No
Liechtenstein	No	No
Lithuania	Yes	Yes
Luxembourg	No	No
Malta	No	No
Monaco	No	No
Montenegro	No	No
Netherlands	No	No
Norway	No	No
Poland	No	No
Portugal	No	No
Romania	No	No
San Marino	No	No
Serbia	No	No
Slovakia	Yes	Yes
Slovenia	No	No
Spain	No	No
Sweden	No	No
Switzerland	No	No
The former Yugoslav Republic of Macedonia	No	No
Turkey	No	No
United Kingdom of Great Britain and Northern Ireland	No	No

ART and chronic non-communicable diseases	ART and general outpatient care	ART and tuberculosis
Few	Few	Many
Few	Few	Few
Few	Few	Few
Few	Few	Many
Few	Few	Few
Few	Few	Many
Few	Few	Few
Many	Many	Many
None	None	Few
Many	Many	Many
None	None	Few
Many	Many	Many
None	Few	Few
Many	Many	Many
	None	Many
None	Few	Many
Few	Few	Few
None	Many	Many
Few	Few	Few
Many	Few	Many
None	Many	Many
Few	Few	Few
None	None	Many
None	None	None
None	None	None
Many	Many	Many

HIV counselling & testing and chronic non-communicable diseases	HIV counselling & testing and general outpatient care	HIV counselling & testing and tuberculosis	HIV cou testing reprodu
Few	Many	Few	
Many	Many	Few	
Many	Many	Few	
Many	Many	Many	
Few	Few	Many	
Few	Many	Many	
Many	Many	Few	
Few	Few	Few	
None	Few	Few	
Many	Many	Many	
None	None	Few	
Many	Many	Many	
None	Few	Few	
Many	Many	Many	
Many	Many	Many	
Many	Many	Many	
Few	Many	Few	
None	Few	Many	
Many	Many	Many	
Many	Many	Few	
None	Many	Many	
Few	Few	Few	
Many	Many	Many	
None	Many	Many	
None	Few	Few	
Many	Many	Many	

ART and chronic non-communicable diseases	ART and general outpatient care	ART and tuberculosis
Few	Few	Many
None	None	Many
Few	Few	Many
Few	Few	Few
Few	Few	Many
None	None	Few
Few	Few	Few
None	Few	Few
Few	Few	Few
Many	Many	Many
None	Few	Few
Many	Many	Many
Few	Many	Few
None	None	Many
None	None	None
Few	Many	
Few	Few	Many
None	Many	Many
Few	Few	Many
None	Few	None
Few	None	Many
Many	Few	Many
Many	None	Many
Few	Many	Few
Few	Few	Few
None	Few	Few
None	None	None

HIV counselling & testing and chronic non-communicable diseases	HIV counselling & testing and general outpatient care	HIV counselling & testing and tuberculosis	HIV cou testing reprodu
Few	Many	Many	
None	None	Many	
Few	Few	Many	
Few	Few	Many	
Few	Few	Many	
None	Few	Many	
Few	Few	Few	
Few	Few	Many	
None	Few	Few	
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None	None	Many	
None	Few	Many	
Few	Few	Few	
Many	Many	Few	
None	Few	Many	
None	Few	Few	
None	None	Many	

ART and chronic non-communicable diseases	ART and general outpatient care	ART and tuberculosis
None	None	None
None	None	Few
Few	Many	Few
None	None	Few
Many	Many	Many
Few	Few	Few
Few	Few	Few
None	None	Few
None	None	Many
None	None	Many
None	Few	Many
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Few	Many	Few
None	Few	Few
Few	Few	Few
Few	Few	Few
Few	Few	Many
None	None	Many
Few	Few	Many
None	None	Many

HIV counselling & testing and chronic non-communicable diseases	HIV counselling & testing and general outpatient care	HIV counselling & testing and tuberculosis	HIV cou testing reprodu
None	None	Few	
None	Few	Few	
None	Many	Few	
None	Few	Few	
Many	Many	Many	
Few	Few	Few	
Few	Few	Few	
None	Few	Few	
None	Few	Many	
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None	Many	Many	
Many	Many	Many	
Few	Few	Few	
Many	Few	Many	
None	Few	Many	
Few	Few	Many	
None	Few	Few	

	ART and chronic non-communicable diseases	ART and general outpatient care	ART and tuberculosis	
	Many	Few	Many	
	None	Few	Few	
	None	Few	Many	
	None	Few	Few	
	None	None	Many	
	Few	Many	Many	
	None	None	Many	
	Few	Many	Many	
	Few	Few	Few	
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	Many	Many	Many	
	Few	Many	Many	
	Many	Many	Many	
	Few	Few	Few	
	None	None	Many	
	None	None		
	Many	Many	None	
	Many	Many	Many	
	Many	Many	Many	
	None	None	Few	

	HIV counselling & testing and chronic non-communicable diseases	HIV counselling & testing and general outpatient care	HIV counselling & testing and tuberculosis	HIV cou testing reprodu
	Many	Many	Many	
	None	Many	Few	
	None	Many	Many	
	None	Few	Few	
	Few	None	Many	
	Few	Many	Many	
	Many	Many	Many	
	Few	Many	Many	
	Few	Few	Many	
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	Few	Many	Many	
	Many	Many	Many	
	Few	Many	Many	
	Few	Many	Many	
	Many	Many	Few	
	None	Many	Many	
	None	None	Few	
	None	Many	None	
	Many	Many	Many	
	Few	Few	Few	
	None	None	Few	

Orphans		Non-orphans	
09	2012	2009	2012
)0	...	100	...
)0	100	100	100
59	95	97	98
77	92	89	96
)0	100	100	100
)0	...	72	...
...	100	...	98
52	62	...	95
...	95	...	93
59	25	55	84
...	89	...	94
...	86	...	97
...	100	...	...
75	75	92	92
...	100	...	...
...	25	...	29
54	78	67	82
75	...	87	...
...	74	...	83
76	70	92	81
87	87	93	93
96	...	96	...
...	66	...	87

	Orphans	
	2009	2012
Sub-Saharan Africa		
Angola	75	71
Benin	6	63
Botswana	...	98
Burkina Faso	56	61
Burundi	...	75
Cameroon	79	...
Central African Republic	65	70
Chad	54	67
Congo	82	...
Côte d'Ivoire	36	46
Democratic Republic of the Congo	63	63
Ethiopia	53	69
Gabon	81	96
Gambia	...	91
Ghana	67	67
Guinea-Bissau	...	78
Kenya	64	94
Lesotho	...	93
Madagascar	...	60
Malawi	89	91
Mali	42	54
Mauritania	51	...
Mozambique	79	66
Namibia	95	94
Niger	25	25
Nigeria	...	84
Rwanda	75	88
Sao Tome and Principe	...	100

Orphans		Non-orphans	
09	2012	2009	2012
…	90	…	94
…	100	…	100
47	47	76	76
98	98	99	99
90	97	93	99
92	77	96	89
…	…	82	
50	32	…	62
31	…	88	…
…	88	…	95
99	…	…	…

atorregistry.org/node/864.

20 Avenue Appia
CH-1211 Geneva 27
Switzerland

+41 22 791 3666
distribution@unaids.org

unaids.org