GLOBAL REPORT

UNAIDS REPORT ON THE GLOBAL AIDS EPIDEMIC | 2012

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WHO Library Cataloguing-in-Publication Data

Global report: UNAIDS report on the global AIDS epidemic 2012

"UNAIDS / JC2417E"

1.HIV infections – therapy. 2.HIV infections – diagnosis. 3.HIV infections – epidemiology.
4.Acquired immunodeficiency syndrome – prevention and control. 5.International cooperation. I.UNAIDS.

ISBN 978-92-9173-996-7 (Printed version) (NLM classification: WC 503.6)
ISBN 978-92-9173-592-1 (Digital version)

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FOREWORD

The progress highlighted in this report will inspire hope around the world. Countries continue to achieve dramatic results in the AIDS response – in lives saved and new infections averted.

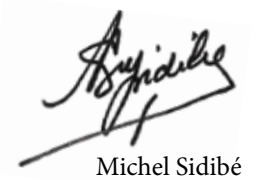
Even as the global economic recovery remains uncertain, our vision of getting to zero new HIV infections, zero discrimination and zero AIDS-related deaths remains high on the international agenda. The data presented here indicates that countries are keeping their commitments to reach the targets of the 2011 United Nations Political Declaration on HIV and AIDS.

The pace of progress has quickened. Increments of achievement that once stretched over many years are now being reached in far less time. In just 24 months,

60% more people have accessed lifesaving HIV treatment, with a corresponding drop in mortality. New infection rates have fallen by 50% or more in 25 countries – 13 of them in in sub-Saharan Africa. Half of all the reductions in HIV infections in the past two years have been among children; this has emboldened our conviction that achieving an AIDS-free generation is not only possible, but imminent.

Yet, it is much too early to congratulate ourselves. AIDS is not over. The data in this report – provided by a record 186 UN Member States, indicate that in many countries, people living with and affected by HIV still face stigma, discrimination and injustice. Women and girls are still at higher risk because of gender inequity and sexual violence. There is still a 30% gap between resources that are available and what is needed annually by 2015.

There are around 1000 days until the deadline for achieving the 2015 AIDS targets. Every one of the next 1000 days will be a test of our commitment to bring an end to this epidemic. We count on all partners globally, regionally and in countries to unite in advancing the AIDS response and delivering breakthrough results for people. Our targets are in sight.



Michel Sidibé
UNAIDS Executive Director
Under Secretary-General
of the United Nations

INTRODUCTION

The global community has embarked on an historic quest to lay the foundation for the eventual end of the AIDS epidemic.

This effort is more than merely visionary. It is entirely feasible. Unprecedented gains have been achieved in reducing the number of both adults and children newly infected with HIV, in lowering the numbers of people dying from AIDS-related causes and in implementing enabling policy frameworks that accelerate progress. A new era of hope has emerged in countries and communities across the world that had previously been devastated by AIDS.

However, a world in which AIDS has been eliminated can only be achieved through renewed and sustained commitment and solidarity and only if the available evidence and limited resources are used as efficiently and effectively as possible.

Recognizing the genuine opportunity to plan for the end of AIDS, countries pledged in the 2011 United Nations Political Declaration on HIV and AIDS: Intensifying Our Efforts to Eliminate HIV and AIDS *(1)* to take specific steps to achieve ambitious goals by 2015. Drawing from the 2011 Political Declaration, UNAIDS has articulated 10 specific targets for 2015 to guide collective action.

1. Reduce sexual transmission by 50%.
2. Reduce HIV transmission among people who inject drugs by 50%.
3. Eliminate new infections among children and substantially reduce the number of mothers dying from AIDS-related causes.
4. Provide antiretroviral therapy to 15 million people.
5. Reduce the number of people living with HIV who die from tuberculosis by 50%.
6. Close the global AIDS resource gap and reach annual global investment of US$ 22 billion to US$ 24 billion in low- and middle-income countries.
7. Eliminate gender inequalities and gender-based abuse and violence and increase the capacity of women and girls to protect themselves from HIV.
8. Eliminate stigma and discrimination against people living with and affected by HIV by promoting laws and policies that ensure the full realization of all human rights and fundamental freedoms.
9. Eliminate restrictions for people living with HIV on entry, stay and residence.
10. Eliminate parallel systems for HIV-related services to strengthen the integration of the AIDS response in global health and development efforts.

In embracing the targets in the 2011 Political Declaration, countries committed to monitor and report on progress and challenges encountered in their national AIDS responses. To facilitate biennial reporting on national progress, UNAIDS collaborated with partners to develop a set of core indicators against which countries would report *(2)*.

In 2012, 186 countries submitted comprehensive reports on progress in their national AIDS response. With 96% of the 193 United Nations Member States reporting in 2012, the Global AIDS Response Progress Reporting system has among the highest response rates of any international health and development monitoring mechanism – a vivid reflection of the breadth and depth of global commitment to the response to AIDS.

186

COUNTRIES REPORTING

In 2012, 186 countries submitted comprehensive reports on their national AIDS response: 96% of UN Member States.

Drawing on information provided by countries, this report summarizes the current situation in the effort to reach the 2015 targets set forth in the 2011 Political Declaration. In addition to providing a snapshot of the current situation for each target, it identifies key trends. Using a scorecard approach on key indicators, the report allows individual countries to compare their own achievements with those of others. Regional breakdowns enable comparison of progress between different parts of the world. This report highlights instances where recommended policies and programmes have yet to be implemented.

As part of global AIDS response monitoring, countries have completed extensive surveys on national AIDS policy frameworks. The National Commitments and Policies Instrument obtains information on the process of national strategizing on AIDS, engagement of civil society and other key constituencies as well as policy approaches for HIV prevention and treatment.

The results summarized here are encouraging, since progress achieved to date conclusively demonstrates the feasibility of achieving the targets set in the 2011 Political Declaration. However, the findings also reveal that, to reach most of those targets by 2015, a significant additional effort is required.

STATE OF THE EPIDEMIC

Although AIDS remains one of the world's most serious health challenges, global solidarity in the AIDS response during the past decade continues to generate extraordinary health gains. Historic success in bringing HIV programmes to scale – combined with the emergence of powerful new tools to prevent people from becoming infected and from dying from AIDS-related causes – has enabled the foundation to be laid for the eventual end of AIDS.

Although much of the news on AIDS is encouraging, challenges remain. The number of people newly infected globally is continuing to decline, but national epidemics continue to expand in many parts of the world. Further, declines in the numbers of children dying from AIDS-related causes and acquiring HIV infection, although substantial, need to be accelerated to achieve global AIDS targets.

THE GLOBAL EPIDEMIC AT A GLANCE

Globally, 34.0 million [31.4 million–35.9 million] people were living with HIV at the end of 2011. An estimated 0.8% of adults aged 15-49 years worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions.

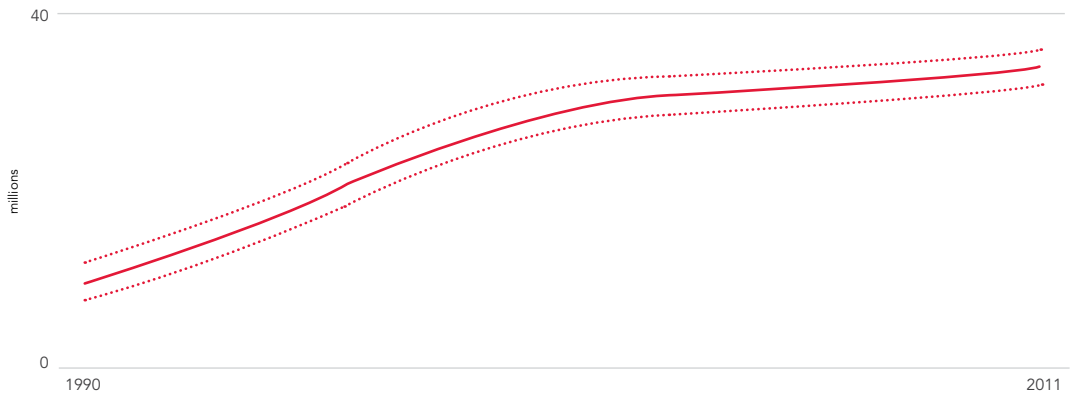
Sub-Saharan Africa remains most severely affected, with nearly 1 in every 20 adults (4.9%) living with HIV and accounting for 69% of the people living with HIV worldwide. Although the regional prevalence of HIV infection is nearly 25 times higher in sub-Saharan Africa than in Asia, almost 5 million people are living with HIV in South, South-East and East Asia combined. After sub-Saharan Africa, the regions most heavily affected are the Caribbean and Eastern Europe and Central Asia, where 1.0% of adults were living with HIV in 2011.

NEW INFECTIONS DECLINING

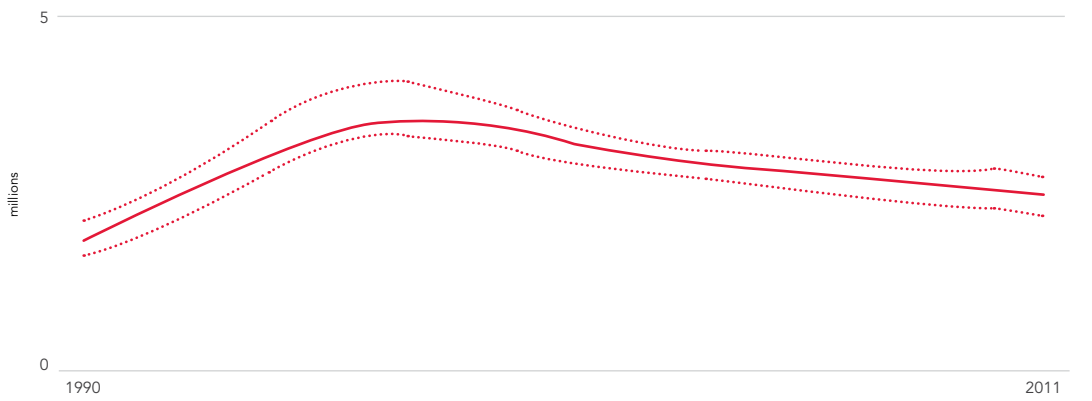
Worldwide, the number of people newly infected continues to fall: the number of people (adults and children) acquiring HIV infection in 2011 (2.5 million [2.2 million–2.8 million]) was 20% lower than in 2001. Here, too, variation is apparent. The sharpest declines in the numbers of people acquiring HIV infection since 2001 have occurred in the Caribbean (42%) and sub-Saharan Africa (25%).

Global HIV trends, 1990–2011

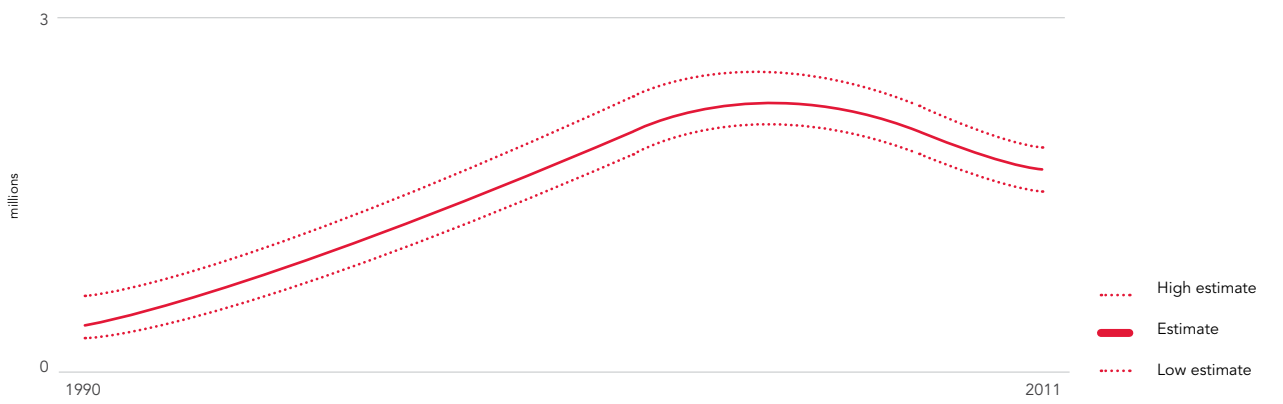
NUMBER OF PEOPLE LIVING WITH HIV, GLOBAL, 1990–2011



NUMBER OF PEOPLE NEWLY INFECTED WITH HIV, GLOBAL, 1990–2011



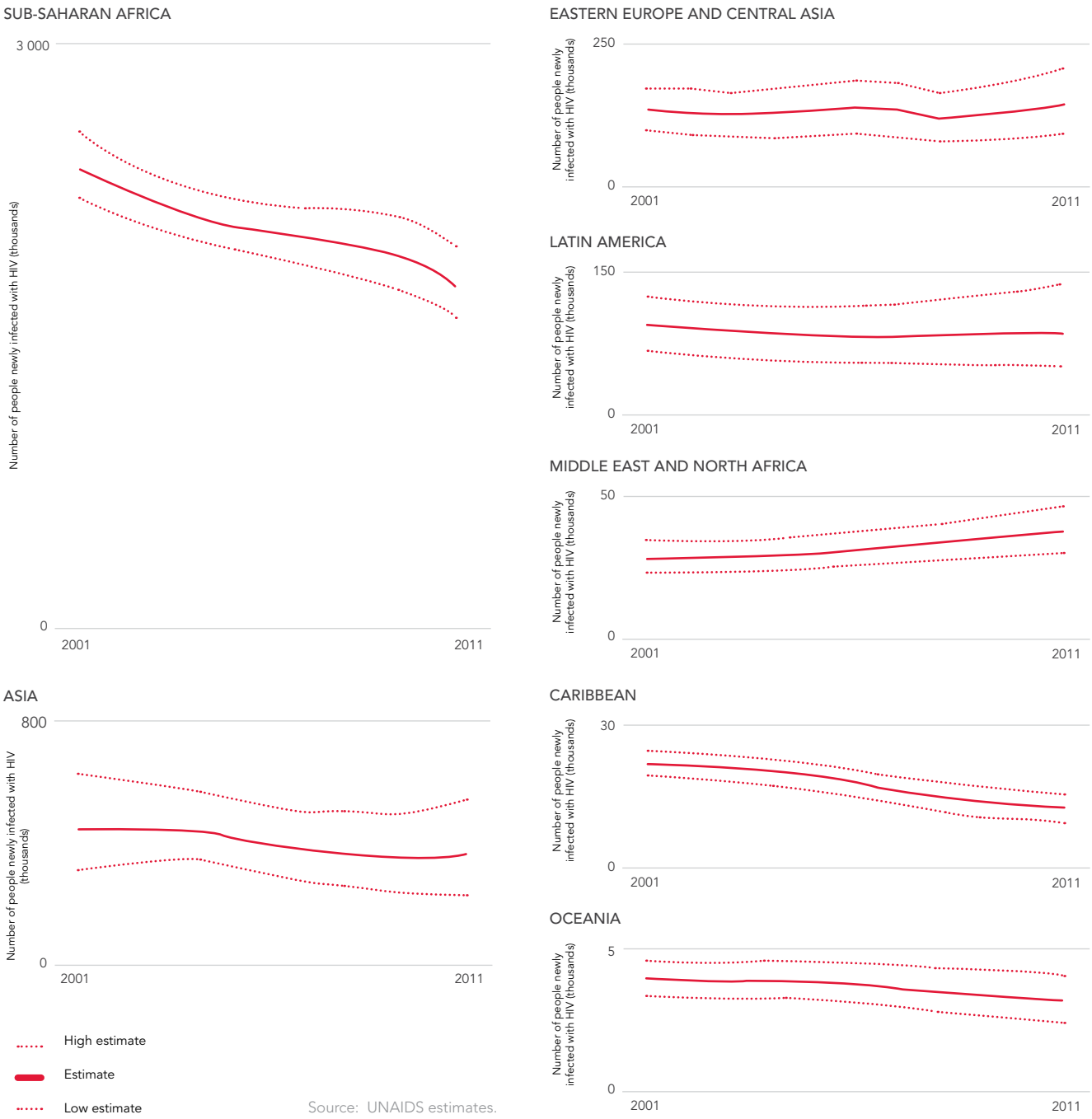
ADULT AND CHILD DEATHS DUE TO AIDS, GLOBAL, 1990–2011



Source: UNAIDS estimates.

In some other parts of the world, HIV trends (for children and adults) are cause for concern. Since 2001, the number of people newly infected in the Middle East and North Africa has increased by more than 35% (from 27 000 [22 000–34 000] to 37 000 [29 000–46 000]). Evidence indicates that the incidence of HIV infection in Eastern Europe and Central Asia began increasing in the late 2000s after having remained relatively stable for several years.

Number of people newly infected with HIV, 2001–2011, by region



Source: UNAIDS estimates.

During the past decade, many national epidemics have changed dramatically. In 39 countries, the incidence of HIV infection among adults fell by more than 25% from 2001 to 2011 (see table). Twenty-three of the countries with steep declines in HIV incidence are in sub-Saharan Africa, where the number of people acquiring HIV infection in 2011 (1.8 million [1.6 million–2.0 million]) was 25% lower than in 2001 (2.4 million [2.2 million–2.5 million]). Despite these gains, sub-Saharan Africa accounted for 71% of the adults and children newly infected in 2011, underscoring the importance of continuing and strengthening HIV prevention efforts in the region.

Epidemiological trends are less favourable in several other countries. In at least nine countries, the number of people newly infected in 2011 was at least 25% higher than in 2001.

Changes in the incidence rate of HIV infection among adults 15–49 years old, 2001–2011, selected countries

Increasing >25%

Bangladesh
Georgia
Guinea-Bissau
Indonesia
Kazakhstan
Kyrgyzstan
Philippines
Republic of Moldova
Sri Lanka

Stable[a]

Angola
Belarus
Benin
Congo
France
Gambia
Lesotho
Nigeria
Tajikistan
Uganda
United Republic of Tanzania
United States of America

Decreasing 26–49%

Burundi
Cameroon
Democratic Republic of the Congo
Jamaica
Kenya
Malaysia
Mali
Mexico
Mozambique
Niger
Sierra Leone
South Africa
Swaziland
Trinidad and Tobago

Decreasing ≥50%

Bahamas
Barbados
Belize
Botswana
Burkina Faso
Cambodia
Central African Republic
Djibouti
Dominican Republic
Ethiopia
Gabon
Ghana
Haiti
India
Malawi
Myanmar
Namibia
Nepal
Papua New Guinea
Rwanda
Suriname
Thailand
Togo
Zambia
Zimbabwe

[a] Countries with incidence rate changes less than 25% up or down.

Source: UNAIDS estimates.
Countries not included in this table have insufficient data and/or analyses to estimate recent trends in incidence among adults and to assess the impact of HIV prevention programmes for adults. The analysis was either published in peer-reviewed literature or was done through recommended modelling tools for national HIV/AIDS estimation. Criteria for inclusion of countries with estimation models include that at least four years of HIV surveillance prevalence data were available for countries with concentrated epidemics and three years for countries with generalized epidemics for each subpopulation used in the estimation, that HIV surveillance data were available through at least 2009 and that the estimated trend in incidence was not contradicted by other data sources. For some countries with complex epidemics, including multiple population groups with different risk behaviours as well as major geographical differences, such as Brazil, China and the Russian Federation, this type of assessment is highly complex and could not be concluded in the 2012 estimation round.

REDUCTIONS IN DEATHS FROM AIDS-RELATED CAUSES

The number of people dying from AIDS-related causes began to decline in the mid-2000s because of scaled-up antiretroviral therapy and the steady decline in HIV incidence since the peak in 1997. In 2011, this decline continued, with evidence that the drop in the number of people dying from AIDS-related causes is accelerating in several countries.

In 2011, 1.7 million [1.5 million–1.9 million] people died from AIDS-related causes worldwide. This represents a 24% decline in AIDS-related mortality compared with 2005 (when 2.3 million [2.1 million–2.6 million] deaths occurred).

1.7
MILLION DIED

In 2011, 1.7 million people worldwide died from AIDS-related causes, down 24% from the peak in 2005.

The number of people dying from AIDS-related causes in sub-Saharan Africa declined by 32% from 2005 to 2011, although the region still accounted for 70% of all the people dying from AIDS in 2011. The Caribbean (48%) and Oceania (41%) experienced significant declines in AIDS-related deaths between 2005 and 2011. More modest declines occurred during the same period in Latin America (10%), Asia (4%) and Western and Central Europe and North America (1%). Two other regions, however, experienced significant increases in mortality from AIDS – Eastern Europe and Central Asia (21%) and the Middle East and North Africa (17%).

A review of country experiences vividly illustrates the changes in AIDS-related mortality patterns in the past several years (see table). In 14 countries, the annual number of people dying from AIDS-related causes declined by at least 50% from 2005 to 2011. In an additional 74 countries, more modest but still notable declines of 10–49% were recorded over the same six-year period.

The scaling up of antiretroviral therapy in low- and middle-income countries has transformed national AIDS responses and generated broad-based health gains. Since 1995, antiretroviral therapy has saved 14 million life-years in low- and middle-income countries, including 9 million in sub-Saharan Africa. As programmatic scale-up has continued, health gains have accelerated, with the number of life-years saved by antiretroviral therapy in sub-Saharan Africa quadrupling in the last four years. Experience in the hyper-endemic KwaZulu-Natal Province in South Africa illustrates the macroeconomic and household livelihood benefits of expanded treatment access, with employment prospects sharply increasing among individuals receiving antiretroviral therapy.

Percentage change in the number of people dying from AIDS-related causes, 2005–2011[a]

No change or decrease <25%

Afghanistan
Algeria
Angola
Armenia
Australia
Azerbaijan
Bangladesh
Belarus
Belize
Brazil
Bulgaria
Cameroon
Canada
Cape Verde
Colombia
Costa Rica
Cuba
Ecuador
Egypt
Equatorial Guinea
France
Gabon
Gambia
Georgia
Guatemala
Guinea-Bissau
Indonesia
Iran (Islamic Republic of)
Italy
Kazakhstan
Kyrgyzstan
Lao People's Democratic Republic
Latvia
Lebanon
Madagascar
Malaysia
Mauritania
Mauritius
Morocco
Mozambique
Myanmar
Nepal
Nicaragua
Niger
Nigeria
Pakistan
Philippines
Poland
Republic of Moldova
Romania
Russian Federation
Senegal
Serbia
Sierra Leone
Singapore
Somalia
Sri Lanka
Sudan
Tajikistan
Togo
Uganda
Ukraine
United Kingdom
United States of America
Uruguay
Venezuela
Viet Nam
Yemen

Decrease 25–49%

Bahamas
Benin
Bolivia (Plurinational State of)
Burkina Faso
Central African Republic
Chad
Congo
Djibouti
El Salvador
Eritrea
Germany
Ghana
Guinea
Haiti
Honduras
Jamaica
Lesotho
Liberia
Malawi
Mali
Mexico
Panama
Papua New Guinea
South Africa
Swaziland
Thailand
United Republic of Tanzania

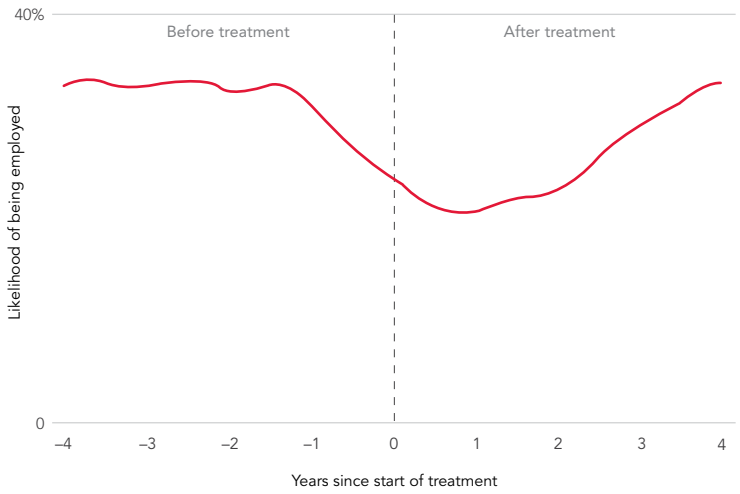
Decrease ≥50%

Botswana
Burundi
Cambodia
Côte d'Ivoire
Dominican Republic
Ethiopia
Guyana
Kenya
Namibia
Peru
Rwanda
Suriname
Zambia
Zimbabwe

[a] Countries with 100 or more AIDS-related deaths in 2011.

Source: UNAIDS estimates.

Likelihood of employment before and after antiretroviral therapy in Kwazulu-Natal, South Africa



Source: Bärnighausen T et al. The economic benefits of ART: evidence from a complete population cohort in rural South Africa. *2nd International HIV Workshop on Treatment as Prevention, Vancouver, Canada, 22–25 April 2012.*

Regional HIV and AIDS statistics, 2001, 2005 and 2011

		Adults and children living with HIV	Adults and children newly infected with HIV
SUB-SAHARAN AFRICA	2011	23.5 million [22 100 000–24 800 000]	1.8 million [1 600 000–2 000 000]
	2001	20.9 million [19 300 000–22 500 000]	2.4 million [2 200 000–2 500 000]
MIDDLE EAST AND NORTH AFRICA	2011	300 000 [250 000–360 000]	37 000 [29 000–46 000]
	2001	210 000 [170 000–270 000]	27 000 [22 000–34 000]
SOUTH AND SOUTH-EAST ASIA	2011	4.0 million [3 100 000–4 600 000]	280 000 [170 000–370 000]
	2001	3.7 million [3 200 000–5 100 000]	370 000 [250 000–450 000]
EAST ASIA	2011	830 000 [590 000–1 200 000]	89 000 [44 000–170 000]
	2001	390 000 [280 000–530 000]	75 000 [55 000–100 000]
OCEANIA	2011	53 000 [47 000–60 000]	2 900 [2 200–3 800]
	2001	38 000 [32 000–46 000]	3 700 [3 100–4 300]
LATIN AMERICA	2011	1.4 million [1 100 000–1 700 000]	83 000 [51 000–140 000]
	2001	1.2 million [970 000–1 500 000]	93 000 [67 000–120 000]
CARIBBEAN	2011	230 000 [200 000–250 000]	13 000 [9600–16 000]
	2001	240 000 [200 000–270 000]	22 000 [20 000–25 000]
EASTERN EUROPE AND CENTRAL ASIA	2011	1.4 million [1 100 000–1800 000]	140 000 [91 000–210 000]
	2001	970 000 [760 000–1 200 000]	130 000 [99 000–170 000]
WESTERN AND CENTRAL EUROPE	2011	900 000 [830 000–1 00 000]	30 000 [21 000–40 000]
	2001	640 000 [590 000–710 000]	29 000 [26 000–34 000]
NORTH AMERICA	2011	1.4 million [1 100 000–2 000 000]	51 000 [19 000–120 000]
	2001	1.1 million [850 000–1 300 000]	50 000 [35 000–71 000]
GLOBAL	2011	34.0 million [31 400 000–35 900 000]	2.5 million [2 200 000–2 800 000]
	2001	29.4 million [27 200 000–32 100 000]	3.2 million [2 900 000–3 400 000]

Source: UNAIDS estimates.

Adult (15–49 years) prevalence, %	Prevalence, young people (15–24 years), %		AIDS-related deaths among adults and children, 2005 and 2011	
	Women	Men		
4.9 [4.6–5.1]	3.1 [2.6–3.9]	1.3 [1.1–1.7]	2011	1.2 million [1 100 000–1 300 000]
5.9 [5.4–6.2]	5.1 [4.2–6.7]	2.0 [1.6–2.7]	2005	1.8 million [1 600 000–1 900 000]
0.2 [0.1–0.2]	<0.1 [<0.1–0.1]	<0.1 [<0.1–0.1]	2011	23 000 [18 000–29 000]
0.1 [0.1–0.2]	<0.1 [<0.1–<0.1]	<0.1 [<0.1–0.1]	2005	20 000 [15 000–25 000]
0.3 [0.2–0.3]	0.1 [<0.1–0.1]	0.1 [<0.1–0.2]	2011	250 000 [190 000–330 000]
0.3 [0.3–0.5]	0.2 [0.1–0.3]	0.2 [0.2–0.3]	2005	290 000 [270 000–310 000]
0.1 [<0.1–0.1]	<0.1 [<0.1–<0.1]	<0.1 [<0.1–<0.1]	2011	59 000 [41 000–82 000]
<0.1 [<0.1–<0.1]	<0.1 [<0.1–<0.1]	<0.1 [<0.1–<0.1]	2005	39 000 [27 000–56 000]
0.3 [0.2–0.3]	0.1 [0.1–0.2]	0.1 [<0.1–0.1]	2011	1 300 [<1 000–1 800]
0.2 [0.2–0.3]	0.2 [0.1–0.3]	0.1 [0.1–0.2]	2005	2 300 [1 700–3 000]
0.4 [0.3–0.5]	0.1 [<0.1–0.2]	0.2 [<0.1–0.5]	2011	54 000 [32 000–81 000]
0.4 [0.3–0.5]	0.1 [<0.1–0.2]	0.3 [0.1–0.7]	2005	60 000 [36 000–93 000]
1.0 [0.9–1.1]	0.6 [0.4–0.7]	0.3 [0.2–0.5]	2011	10 000 [8200–12 000]
1.2 [1.0–1.3]	1.0 [0.8–1.2]	0.5 [0.3–0.9]	2005	20 000 [16 000–23 000]
1.0 [0.6–1.0]	0.5 [0.4–0.7]	0.7 [0.5–0.9]	2011	92 000 [63 000–120 000]
0.3 [0.4–0.7]	0.2 [<0.1–0.2]	0.3 [0.2–0.3]	2005	76 000 [58 000–100 000]
0.2 [0.2–0.3]	<0.1 [<0.1–<0.1]	0.1 [<0.1–0.1]	2011	7 000 [6 100–7 500]
0.2 [0.2–0.2]	<0.1 [<0.1–<0.1]	0.1 [<0.1–0.1]	2005	7 800 [7 600–9 000]
0.6 [0.5–1.0]	0.2 [<0.1–0.4]	0.3 [0.1–0.5]	2011	21 000 [17 000–28 000]
0.6 [0.5–0.7]	0.2 [0.1–0.3]	0.3 [0.2–0.4]	2005	20 000 [16 000–26 000]
0.8 [0.7–0.8]	0.6 [0.4–0.6]	0.3 [0.2–0.4]	2011	1.7 million [1 500 000–1 900 000]
0.8 [0.7–0.9]	0.7 [0.6–0.9]	0.4 [0.3–0.5]	2005	2.3 million [2 100 000–2 600 000]

1 SEXUAL TRANSMISSION

Getting to zero new HIV infections will require substantial reductions each year in sexual HIV transmission, which accounts for the overwhelming majority of the people who are newly infected. Although there is reason for optimism, including favourable trends in sexual behaviour in many countries and the additive impact of new biomedical prevention strategies, the current pace of progress is insufficient to reach the global goal of halving sexual transmission by 2015, underscoring the urgent need for intensified action.

Getting to zero new infections will require effective combination prevention: using behavioural, biomedical and structural strategies in combination, both intensively in specific populations in concentrated epidemics and across the whole population in generalized epidemics *(1,2)*.[1] Critical programmatic elements of combination prevention of the sexual transmission of HIV include behaviour change, condom provision, male circumcision, focused programmes for sex workers and men who have sex with men and access to antiretroviral therapy.

BEHAVIOUR CHANGE IS HELPING TO PREVENT SEXUAL TRANSMISSION IN GENERALIZED EPIDEMICS

Behaviour change programmes seek to promote safer individual behaviour as well as changes in social norms that generate healthier patterns of sexual behaviour. Behaviour change is complex; it involves knowledge, motivations and choices, which are influenced by sociocultural norms, as well as risk assessment in relation to immediate benefits and future consequences. It involves both rational decision-making and impulsive and automatic behaviour *(3)*. HIV behaviour change programmes have largely been measured against the outcomes of reduction in the number of young people initiating sexual intercourse early and the number of sexual partners and increase in the correct and consistent use of condoms among people who are sexually active.

[1] This section reports on available information regarding sexual behaviour in the general population, coverage of male circumcision and HIV among sex workers and men who have sex with men. Unless otherwise indicated, data are from the 2012 country progress reports (www.unaids.org/cpr). Data on key populations at higher risk from country progress reports typically derive from surveys in capital cities and are not representative of the entire country. In particular, surveys in capital cities are likely to overestimate national HIV prevalence and service coverage.

Fig. 1.1

Sexual risks: changes in the percentages of men and women 15–24 years old having sex before age 15 years; men and women 15–49 years old having multiple partners; and those with multiple partners who used a condom at last sex, in selected countries with adult HIV prevalence greater than 1%, for selected years 2000–2011[a]

[a] Sex before age 15 years in Ethiopia is for the years 2000 and 2011.

Sources:nationally representative household surveys.
To measure progress towards these aims, countries monitor the percentage of young men and women who report having sex before age 15 years, the percentage of men and women who report having more than one partner during a 12-month period and the percentage of men and women reporting more than one sexual partner in the previous year who also report using a condom during their last episode of sexual intercourse.

Fig. 1.1 indicates that sexual behaviour among men and women has changed favourably in numerous countries with generalized epidemics. Favourable changes in risky sexual behaviour are evident in many countries, including Kenya, Malawi, Mozambique, Namibia, Nigeria and Zambia. In other countries – such as Côte d'Ivoire, Guyana and Rwanda – increases in sexual risk behaviour are found, highlighting the need to intensify support for behaviour change efforts.

Age-appropriate sexuality education may increase knowledge and contribute to more responsible sexual behaviour. However, there are significant gaps in even basic knowledge about HIV and its transmission. In 26 of 31 countries with generalized epidemic in which nationally representative surveys were carried out recently, less than 50% of young women have comprehensive and correct knowledge about HIV. Notably, young women are lacking in knowledge concerning the effectiveness of condoms in preventing HIV transmission. In 21 of 25 countries with nationally representative surveys, young men had less than 50% comprehensive and correct knowledge about HIV.

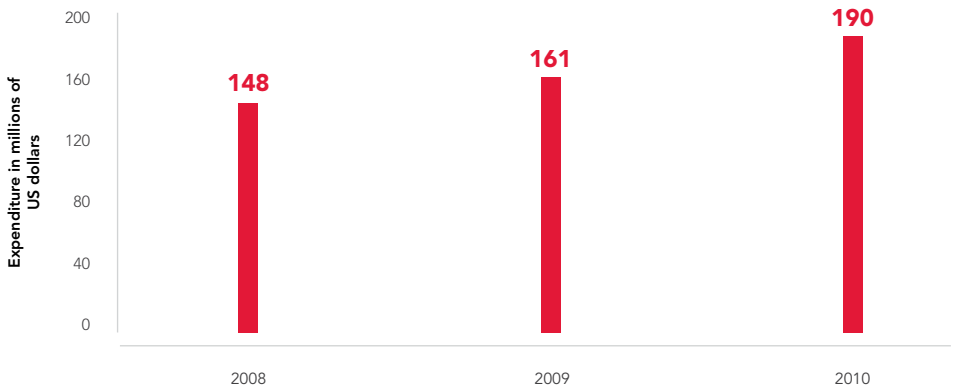
Although population-level behaviour change has been shown to reduce the prevalence of HIV infection in several countries with generalized epidemics *(4–6)*, linking behaviour change programming to specific HIV outcomes remains challenging. The consistent association between behaviour change and reduced incidence provides plausible support for the impact of behaviour change programming in general, but more specific evidence showing which programmatic elements have which effects is urgently needed to help guide wise investment (see the section on the state of the epidemic for changes in the number of people newly infected with HIV). Disentangling the attribution of effects between specific HIV programme elements and more general changes in the enabling environment, such as stigma reduction and universal education, is also difficult (see Section 8).

These challenges make it difficult to draw clear conclusions about the scale of funding needed for behaviour change programming. Among the 26 countries with generalized epidemics that submitted expenditure data for the most recent year, an average of 5% of HIV expenditure was allocated to behaviour change programming (including condom promotion), representing 36% of overall prevention spending. Some evidence indicates absolute increases in spending: among 17 countries with comparable data over multiple years,[2] total expenditure on behaviour change programming (including condom promotion) rose from US$ 148 million in 2008 to US$ 190 million in 2010. These figures include spending on HIV-related information, education and communication about HIV; community mobilization; risk reduction for vulnerable populations; social marketing of condoms; preventing sexually transmitted infections; behaviour change communication; and prevention activities among youth, among others (Fig. 1.2).

[2] Angola, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Gabon, Ghana, Guinea-Bissau, Haiti, Kenya, Lesotho, Nigeria and Togo.

Fig. 1.2

Expenditure on changing behaviour and promoting condom use in 17 countries with generalized epidemics and available data, 2008–2010



Source: 2012 country progress reports (www.unaids.org/cpr).

DISTRIBUTING AND PROMOTING CONDOMS

Condom use is a critical element of combination prevention and one of the most efficient technologies available to reduce the sexual transmission of HIV. Although levels of reported condom use appear to be increasing in several countries with a high prevalence of HIV infection, recent data from nationally representative surveys indicate declines in condom use in Benin, Burkina Faso, Côte d'Ivoire and Uganda (Fig. 1.1). In addition, knowledge about condoms remains low in several of the high-prevalence countries, especially among young women.

The United Nations Population Fund (UNFPA) estimates that only nine donor-provided male condoms were available for every man aged 15–49 years in sub-Saharan Africa in 2011 and one female condom for every 10 women aged 15–49 years in the region. Less is known about the procurement of condoms by low- and middle-income countries directly. One estimate *(7)* suggests that low- and middle-income countries directly procured more than 2 billion condoms in 2010 compared with an estimated 13 billion condoms required for HIV prevention in 2015 *(8)*.

Increasing condom use requires both adequate supply and adequate demand. A recent study in Kenya estimated that, although condom use was low in the study population, so was the unmet need for condoms, highlighting the importance of building demand for condoms in the context of HIV prevention *(9)*. The demand for condoms to protect against HIV infection may also be affected by other prevention programmes, such as perceptions that risks are lower because of interventions such as male circumcision or post-exposure prophylaxis or that partners receiving antiretroviral therapy will be less infectious, and similarly, the consequences of HIV infection may be seen as less devastating in the era of effective therapy thus decreasing the need for protection. These potential risk compensation effects are being closely scrutinized, but the dynamics are complex to track.

LIMITED PROGRESS IN BRINGING VOLUNTARY MEDICAL MALE CIRCUMCISION TO SCALE

Male circumcision reduces the likelihood that men will acquire HIV from a female partner. Since 2007, WHO and UNAIDS have recommended voluntary medical male circumcision in countries with high rates of HIV infection and low rates of male circumcision. Rapidly scaling up voluntary medical male circumcision has the potential to prevent estimated 1 in 5 of the people who would have acquired HIV infection from doing so in eastern and southern Africa through 2025 *(10)*. Most countries in which voluntary medical male circumcision is recommended have endorsed the intervention, adopted roll-out policies and begun training health care workers in administering circumcision procedures.

Table 1.1

Percentage of the 2015 national targets for male circumcisions met by 2011

<5%	5–20%	>20%
Malawi	Botswana	Ethiopia
Mozambique	South Africa	Kenya
Namibia	United Republic of Tanzania	Swaziland
Rwanda	Zambia	
Uganda		
Zimbabwe		

Note: other countries with high HIV prevalence and low levels of male circumcision include South Sudan and the Central African Republic.

Source: WHO and UNAIDS. *Progress in scaling up voluntary medical male circumcision for HIV prevention in east and southern Africa*. Geneva, World Health Organization (forthcoming).

Countries that have given priority to male circumcision have established national targets for the number of voluntary medical male circumcisions to be performed by 2015. Rolling out medical male circumcision in Kenya is focused on Nyanza Province, where 54% of the targeted 230 000 male circumcisions have been performed as of December 2011. Ethiopia and Swaziland achieved more than 20% of their national target for voluntary medical male circumcision. In other priority countries, progress has been much slower (Table 1.1). In six countries (Malawi, Mozambique, Namibia, Rwanda, Uganda and Zimbabwe), less than 5% of the target number of men had been circumcised by the end of 2011 *(11)*. Only two of the priority countries (Ethiopia and Swaziland) have integrated male circumcision into infant care programmes.

The unit cost of voluntary medical male circumcision is relatively low, and unlike most other prevention or treatment efforts, requires only one-time rather than lifelong expenditure. Nevertheless, countries have allocated relatively few resources towards scaling up this intervention, with less than 2% of total HIV expenditure allocated to voluntary medical male circumcision in 6 of the 14 priority countries with data available (Botswana, Kenya, Lesotho, Namibia, Rwanda and Swaziland). Some countries, such as Botswana, Kenya, Namibia and Swaziland, have increased expenditure for rolling out circumcision more recently. Given the lifelong risk reduction that male circumcision confers, it is clear that, the earlier programmes invest in ensuring high levels of coverage, the better.

PREVENTING HIV INFECTION IN SEX WORK

The number of countries reporting data on epidemiological trends and service coverage pertaining to sex workers significantly increased from 2006 to 2012, reflecting greater official recognition of the HIV-related needs of this population. Among generalized epidemic countries, country-reported HIV prevalence is consistently higher among sex workers in the capital city than among the general population with a median of 23% (Fig. 1.4). Median country-reported HIV prevalence among sex workers in the capital cities has remained stable between 2006 and 2011. Similarly, a recent review of available data from 50 countries, which estimated the global HIV prevalence among female sex workers at 12%, found that female sex workers were 13.5 times more likely to be living with HIV than are other women *(12)*.

13.5×

Female sex workers are 13.5 times more likely to be living with HIV than are other women.

Nearly three quarters of reporting countries (73%) indicated they have implemented risk-reduction programmes for sex workers. Among 58 countries reporting data from surveys in capital cities, the median coverage of HIV prevention services for sex workers is 56% (Table 1.2), only marginally higher than in 2010, with 11 countries reportedly reaching at least 80% of sex workers. Although country-reported data remain limited and consistent comparisons across countries are difficult, countries that lack legal protections for sex workers appear to have lower median prevention coverage. According to data provided by 85 countries, 85% of sex workers in capital cities report having used a condom the last time they had sex.

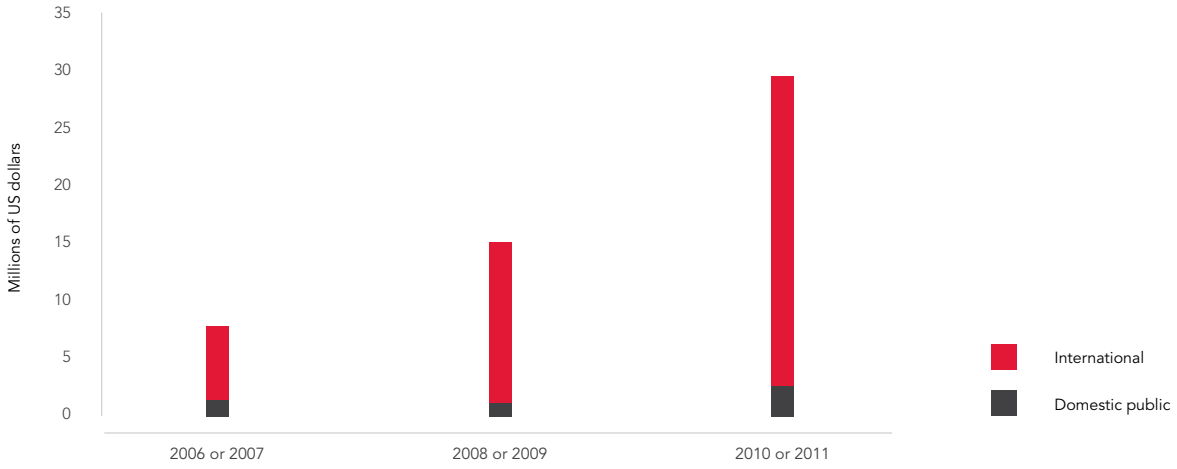
Programmes targeting sex workers are common but are far less consistently available for the clients of sex workers. Programmes that effectively target and engage the clients of sex workers are a critical omission, as this is a large population in many countries, and reducing the demand for unprotected paid sex is an important complement to programmes that target sex workers themselves.

The vast majority of countries (86%) address sex work in their multisectoral AIDS strategies. Although most country reports on sex workers pertain to females, a growing number of countries (10% in 2012) also provided information on male sex workers.

Funding for HIV prevention programmes for sex workers has increased significantly in recent years. Among 30 countries that reported spending for sex worker programming (with data available for at least one year in 2006–2007, 2008–2009 or 2010–2011), total spending rose 3.7-fold during 2006–2011. Funding patterns raise questions regarding the future sustainability of prevention programmes for sex workers. International funding has generated almost all the increased funding and accounted for 91% of total spending on HIV programmes for sex workers in 2010–2011.

Fig. 1.3

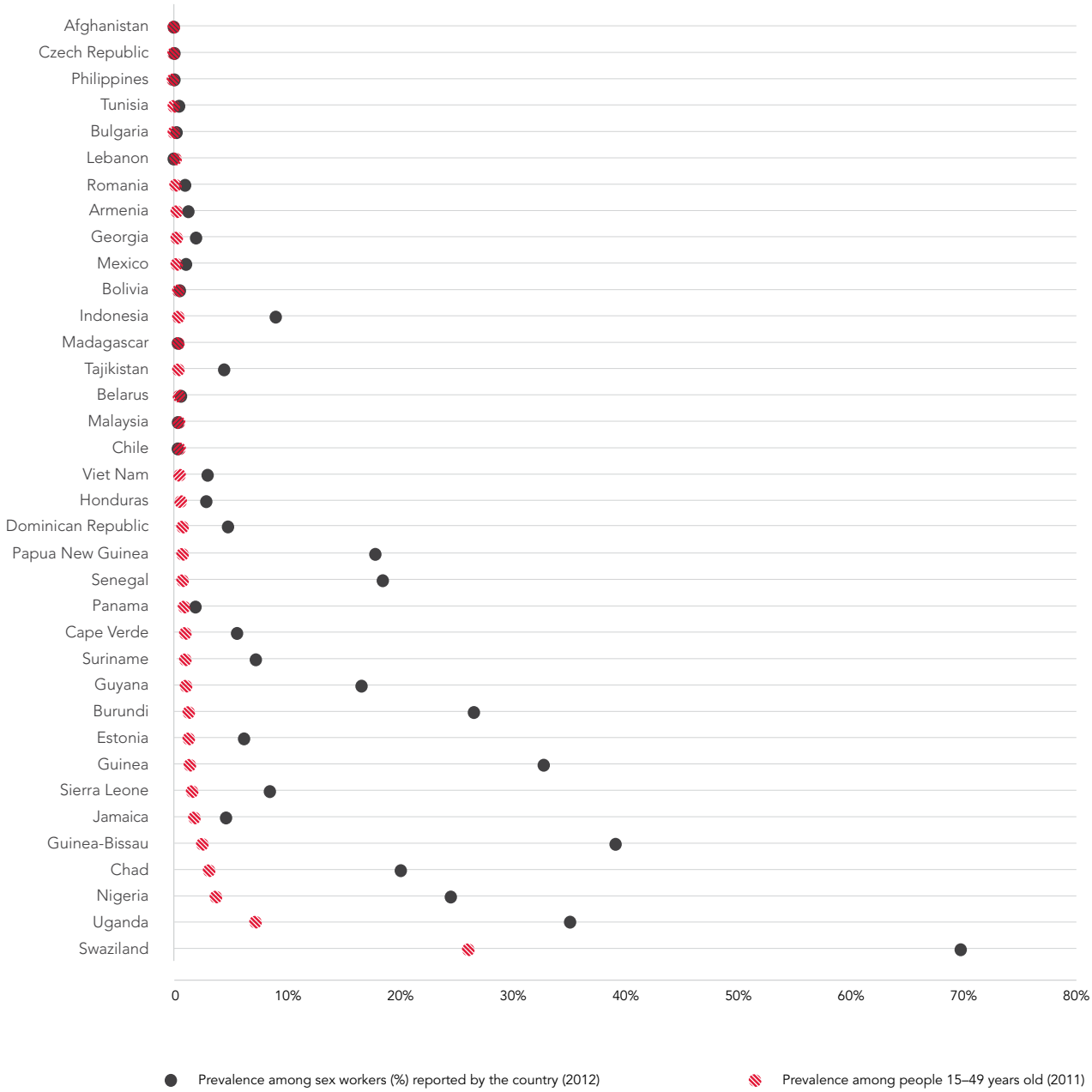
HIV spending on prevention programmes for sex workers and their clients
30 low- and middle-income countries with available data, latest year available



Source: 2012 country progress reports (www.unaids.org/cpr).

Fig. 1.4

Prevalence of HIV infection among sex workers versus the general population in countries with available data, 2012



Sources: prevalence for the general population: UNAIDS estimates for 2011; prevalence for sex workers: 2012 country progress reports (www.unaids.org/cpr). Sex workers are classified as having received prevention services if they respond yes to whether they know where to get HIV testing and have been given condoms in the past 12 months.

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative. Data is only shown for countries which have reported a sample size greater than 100.

Table 1.2

Reported coverage of HIV prevention programmes among sex workers in selected countries, 2012 country reports

<25%

Afghanistan
Armenia
Bangladesh
Greece
Guyana
Indonesia
Nicaragua
Nigeria
Pakistan

25–49%

Azerbaijan
Benin
Bolivia
Brazil
Chile
Democratic Republic of the Congo
Dominican Republic
Honduras
Kyrgyzstan
Latvia
Madagascar
Morocco
Papua New Guinea
Suriname
The former Yugoslav Republic of Macedonia
Tunisia
Viet Nam

50–74%

Bulgaria
Burkina Faso
Chad
Côte d'Ivoire
France
Ghana
Lao People's Democratic Republic
Mexico
Mongolia
Paraguay
Philippines
Serbia
Thailand
Ukraine
Uzbekistan

75–100%

Angola
Belarus
Cape Verde
China
Cuba
Djibouti
Estonia
Guinea
Haiti
Jamaica
Kazakhstan
Mauritius
Myanmar
Senegal
Tajikistan
Togo

Non-reporting countries

Albania
Algeria
Andorra
Antigua and Barbuda
Argentina
Australia
Austria
Bahamas
Bahrain
Barbados
Belgium
Belize
Bhutan
Bosnia and Herzegovina
Botswana
Brunei Darussalam
Burundi
Cambodia
Cameroon
Canada
Central African Republic
Colombia
Comoros
Congo
Costa Rica
Croatia
Cyprus
Czech Republic
Democratic People's Republic of Korea
Denmark
Dominica
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Finland
Gabon
Gambia
Georgia
Germany
Grenada
Guatemala
Guinea-Bissau
Hungary
Iceland
India
Iran (Islamic Republic of)
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kenya
Kiribati
Kuwait
Lebanon
Lesotho
Liberia
Libya
Liechtenstein
Lithuania
Luxembourg
Malawi
Malaysia
Maldives
Mali
Malta
Marshall Islands
Mauritania
Micronesia (Federated States of)
Monaco
Montenegro
Mozambique
Namibia
Nauru
Nepal
Netherlands
New Zealand
Niger
Norway
Oman
Palau
Panama
Peru
Poland
Portugal
Qatar
Republic of Korea
Republic of Moldova
Romania
Russian Federation
Rwanda
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Samoa
San Marino
Sao Tome and Principe
Saudi Arabia
Seychelles
Sierra Leone
Singapore
Slovakia
Slovenia
Solomon Islands
Somalia
South Africa
Spain
Sri Lanka
Sudan
Swaziland
Sweden
Switzerland
Syrian Arab Republic
Timor-Leste
Tonga
Trinidad and Tobago
Turkey
Turkmenistan
Tuvalu
Uganda
United Arab Emirates
United Kingdom
United Republic of Tanzania
United States of America
Uruguay
Vanuatu
Venezuela (Bolivarian Republic of)
Yemen
Zambia
Zimbabwe

Source: 2010 and 2012 country progress reports (www.unaids.org/cpr).

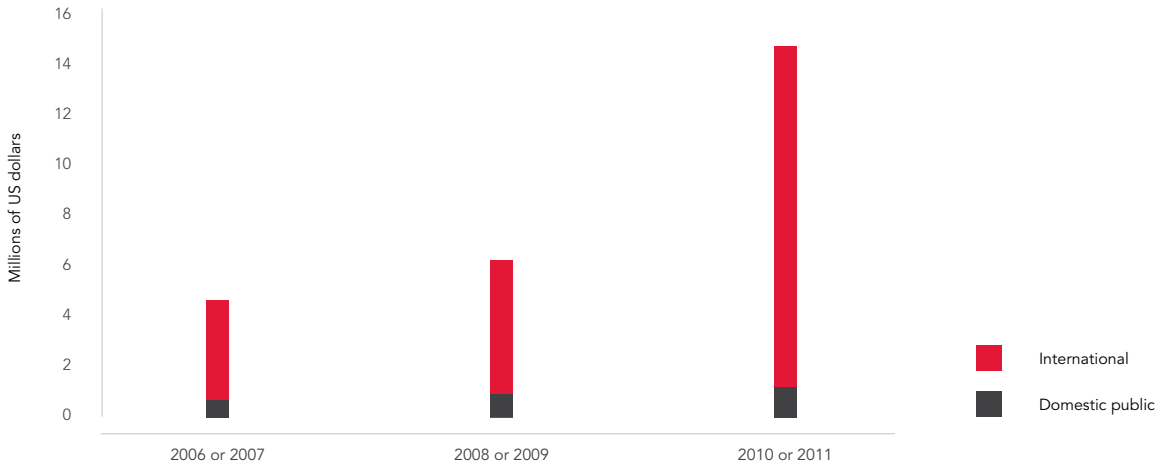
These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

RESPONDING TO THE GLOBAL HIV EPIDEMIC AMONG MEN WHO HAVE SEX WITH MEN

The HIV prevalence among men who have sex with men in capital cities is consistently higher than that in the general population (Fig. 1.6) *(13)*. The prevalence of HIV infection among men who have sex with men in surveys in capital cities is on average 13 times higher than that in the country's general population. Studies in East Asia suggest rising trends in HIV prevalence among men who have sex with men, and some evidence indicates that the global prevalence of HIV infection among men who have sex with men may have increased from 2010 to 2012, although data are limited and the use of diverse study methods creates difficulty in comparing results across settings and time *(13,14)*.

Fig. 1.5

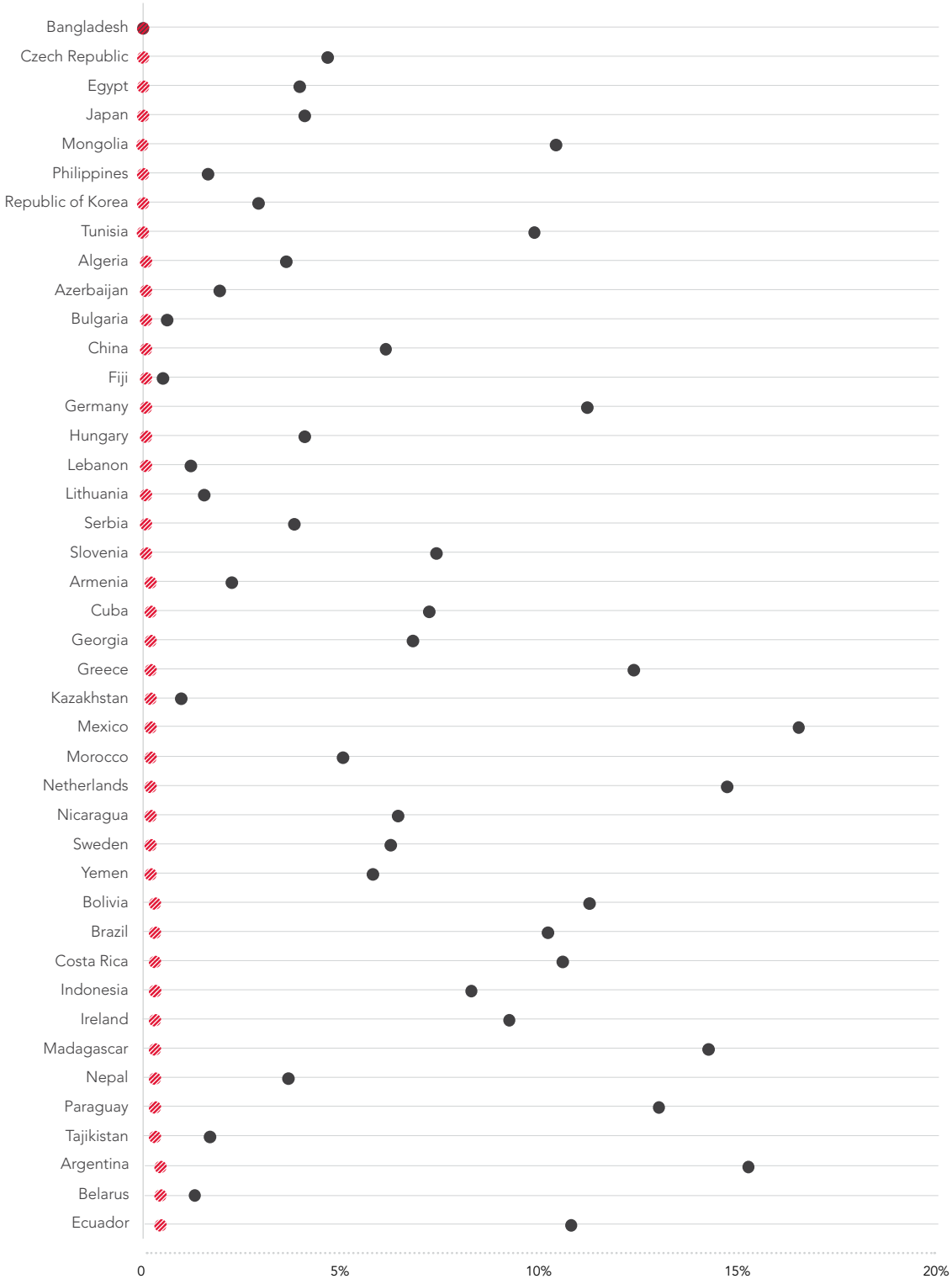
HIV spending on prevention programmes for men who have sex with men
21 low- and middle-income countries with available data, latest year available

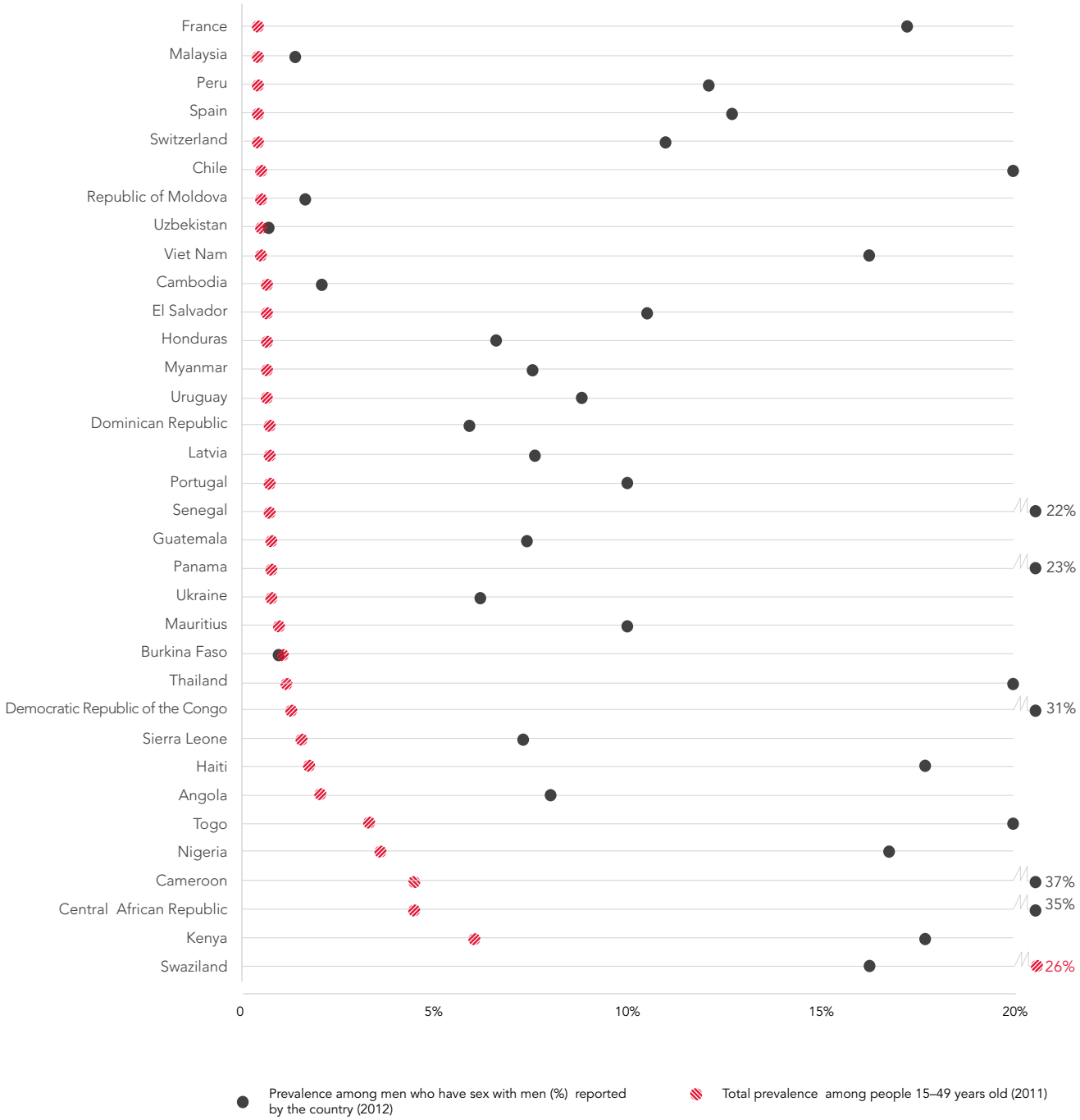


Source: 2012 country progress reports (www.unaids.org/cpr).

Fig. 1.6

Prevalence of HIV infection among men who have sex with men versus the general population in countries with available data, most recent year





Sources: prevalence in the general population: UNAIDS estimates for 2011; prevalence among men who have sex with men: 2012 country progress reports (www.unaids.org/cpr): the surveys are from multiple years between 2005 and 2011.
These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.
Data is only shown for countries which have reported a sample size greater than 100.

Prevention coverage remains inadequate for men who have sex with men. Globally, the median prevention coverage measured in surveys in capital cities is 55%, with a majority of countries reportedly achieving at least 40% coverage for men who have sex with men (Table 1.3). The median proportion of men who have sex with men who received an HIV test in the last 12 months is 38%, with fewer than 1 in 3 men being tested in the past 12 months in South and South-East Asia and Western and Central Europe, where men who have sex with men play a substantial role in national epidemics (Table 1.4).

One of the reasons for the persistent epidemic among men who have sex with men is that levels of consistent condom use are insufficient. Although a majority of surveyed men who have sex with men said that they used a condom during their last episode of sexual intercourse in 69 of 96 countries reporting, in only 13 of these countries did more than 75% do so (Table 1.5). More information is needed on the extent of non-condom use among regular partners of known concordant HIV status, but rates of consistent condom use in this population clearly need to increase to curb the epidemic.

38%
TESTED

The median proportion of men who have sex with men receiving an HIV test in the past 12 months is 38%.

More countries are acknowledging the existence of men who have sex with men as a key population in relation to the epidemic, reflected both in the inclusion of men who have sex with men in national strategies in 146 countries and in increased reporting of prevalence data. The number of countries reporting data on HIV prevalence among men who have sex with men rose from 67 in 2010 to 104 in 2012, with an additional 62 countries acknowledging the relevance of this indicator but reporting that data were unavailable. Eleven countries reported that this indicator would be irrelevant. Reporting on men who have sex with men has notably increased in sub-Saharan Africa: from 11 countries in 2010 to 22 countries in 2012. The countries that include men who have sex with men in national AIDS strategies reported data on this population, whereas only 4 of the 15 countries that do not include this population in their national strategies reported data on relevant indicators in 2012.

Funding for HIV programmes for men who have sex with men increased between 2006 and 2011. Among 21 countries reporting HIV spending data for men who have sex with men (with data available for at least one year in each of 2006–2007, 2008–2009 and 2010–2011), total spending increased 3.2-fold.

Although countries are increasingly recognizing the need to address HIV among men who have sex with men, recent increases in resources for HIV programmes for men who have sex with men have primarily resulted from the efforts of international donors. In 2010–2011, international funding accounted for 92% of all spending on HIV programmes for men who have sex with men. Among 58 countries reporting expenditure for men who have sex with men, 45 relied primarily on external sources for such programming, including 19 of 21 upper-middle-income countries.

Table 1.3

Reported levels of coverage of prevention programmes among men who have sex with men, most recent year

<25%

Azerbaijan
Bangladesh
Georgia
Indonesia
Nigeria
Philippines
Republic of Moldova
Viet Nam

25–49%

Brazil
Democratic Republic of the Congo
Honduras
Kyrgyzstan
Latvia
Mauritius
Mexico
Morocco
Nicaragua
Portugal
Republic of Korea
Serbia
Tajikistan
Thailand
The former Yugoslav Republic of Macedonia
Tunisia
Uzbekistan
Yemen

50–74%

Armenia
Belize
Bolivia (Plurinational State of)
Bulgaria
Cambodia
Cameroon
Chile
Costa Rica
Côte d'Ivoire
Czech Republic
Dominica
Ecuador
Germany
Mongolia
Myanmar
Papua New Guinea
Paraguay
Suriname
Sweden
Ukraine
United States of America

75–100%

Angola
Bahamas
Belarus
China
Cuba
Egypt
Ghana
Jamaica
Kazakhstan
Nepal
Saint Vincent and the Grenadines
Senegal
Seychelles

Non-reporting countries

Afghanistan
Algeria
Andorra
Antigua and Barbuda
Argentina
Australia
Austria
Bahrain
Barbados
Belgium
Benin
Bhutan
Bosnia and Herzegovina
Botswana
Brunei Darussalam
Canada
Cape Verde
Central African Republic
Chad
Comoros
Congo
Croatia
Cyprus
Democratic People's Republic of Korea
Djibouti
Dominican Republic
Equatorial Guinea
Eritrea
Estonia
Ethiopia
Fiji
Finland
France
Gabon
Gambia
Greece
Grenada
Guatemala
Guinea
Guinea-Bissau
Haiti
Hungary
Iceland
India
Iran (Islamic Republic of)
Iraq
Israel
Japan
Jordan
Kenya
Kiribati
Kuwait
Lao People's Democratic Republic
Lebanon
Lesotho
Liberia
Libya
Liechtenstein
Lithuania
Luxembourg
Malawi
Maldives
Mali
Malta
Marshall Islands
Mauritania
Micronesia (Federated States of)
Monaco
Montenegro
Mozambique
Namibia
Nauru
Netherlands
New Zealand
Niger
Norway
Oman
Pakistan
Palau
Peru
Poland
Qatar
Russian Federation
Rwanda
Saint Lucia
Samoa
San Marino
Sao Tome and Principe
Saudi Arabia
Sierra Leone
Singapore
Slovakia
Solomon Islands
Somalia
South Africa
South Sudan
Spain
Sri Lanka
Sudan
Switzerland
Syrian Arab Republic
Tonga
Trinidad and Tobago
Turkey
Turkmenistan
Tuvalu
Uganda
United Arab Emirates
United Kingdom
United Republic of Tanzania
Uruguay
Vanuatu
Venezuela (Bolivarian Republic of)
Zambia
Zimbabwe

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

Table 1.4

Reported levels of coverage of HIV testing among men who have sex with men, most recent year

<25%

Azerbaijan
Bangladesh
Bosnia and Herzegovina
Brazil
Burundi
Cuba
Gambia
Lithuania
Mauritius
Montenegro
Nigeria
Philippines
Republic of Moldova
Sri Lanka
Tunisia

25–49%

Albania
Angola
Armenia
Belgium
Bolivia (Plurinational State of)
Bulgaria
Cambodia
Canada
Chile
China
Czech Republic
Dominica
Dominican Republic
Ecuador
Estonia
France
Georgia
Germany
Haiti
Honduras
Japan
Kenya
Kyrgyzstan
Latvia
Luxembourg
Madagascar
Malaysia
Mexico
Morocco
Myanmar
Nepal
Nicaragua
Republic of Korea
Romania
Saint Vincent and the Grenadines
Senegal
Serbia
Singapore
South Africa
South Sudan
Spain
Sweden
Switzerland
Tajikistan
Thailand
The former Yugoslav Republic of Macedonia
Timor-Leste
Ukraine
United Kingdom
Uruguay
Uzbekistan
Viet Nam
Yemen

50–74%

Argentina
Australia
Bahamas
Belarus
Belize
Cameroon
Costa Rica
Côte d'Ivoire
Egypt
Guyana
Jamaica
Kazakhstan
Mongolia
Netherlands
Norway
Panama
Papua New Guinea
Paraguay
Peru
Portugal
Seychelles
Swaziland
Togo
United States of America

75–100%

Burkina Faso
Central African Republic
El Salvador
Guatemala
Indonesia
Marshall Islands
Saint Kitts and Nevis
Suriname

Non-reporting countries

Afghanistan
Algeria
Andorra
Antigua and Barbuda
Austria
Bahrain
Barbados
Benin
Bhutan
Botswana
Brunei Darussalam
Cape Verde
Chad
Comoros
Congo
Croatia
Cyprus
Democratic People's Republic of Korea
Democratic Republic of the Congo
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Ghana
Grenada
Guinea
Guinea-Bissau
Hungary
Iceland
India
Iran (Islamic Republic of)
Iraq
Israel
Jordan
Kiribati
Kuwait
Lao People's Democratic Republic
Lebanon
Lesotho
Liberia
Libya
Liechtenstein
Malawi
Maldives
Malta
Mauritania
Micronesia (Federated States of)
Monaco
Mozambique
Namibia
Nauru
New Zealand
Niger
Oman
Pakistan
Palau
Qatar
Russian Federation
Rwanda
Saint Lucia
Samoa
San Marino
Sao Tome and Principe
Saudi Arabia
Sierra Leone
Slovakia
Solomon Islands
Somalia
South Sudan
Syrian Arab Republic
Tonga
Trinidad and Tobago
Turkey
Turkmenistan
Tuvalu
Uganda
United Arab Emirates
United Republic of Tanzania
Vanuatu
Venezuela (Bolivarian Republic of)
Zambia
Zimbabwe

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

Table 1.5

Reported levels of condom use among men who have sex with men, most recent year

<25%

Egypt
Yemen

25–49%

Angola
Australia
Azerbaijan
Bangladesh
Czech Republic
Democratic Republic of the Congo
Estonia
Gambia
Guinea
Japan
Latvia
Lithuania
Malaysia
Morocco
Netherlands
Peru
Philippines
Romania
Sweden
Switzerland
The former Yugoslav Republic of Macedonia
Togo
Tunisia
United States of America
Uruguay

50–74%

Albania
Argentina
Armenia
Belarus
Belgium
Bolivia (Plurinational State of)
Bosnia and Herzegovina
Brazil
Bulgaria
Burkina Faso
Burundi
Cambodia
Cameroon
Canada
Central African Republic
Chile
China
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
France
Georgia
Germany
Haiti
Honduras
Indonesia
Kenya
Kyrgyzstan
Mauritius
Mexico
Mongolia
Montenegro
Nicaragua
Nigeria
Panama
Papua New Guinea
Paraguay
Portugal
Republic of Korea
Republic of Moldova
Saint Vincent and the Grenadines
Serbia
Sierra Leone
South Sudan
Spain
Sri Lanka
Suriname
Tajikistan
Timor-Leste
Ukraine
United Kingdom
Uzbekistan
Vanuatu

75–100%

Bahamas
Belize
Côte d'Ivoire
Guatemala
Jamaica
Kazakhstan
Myanmar
Nepal
Saint Kitts and Nevis
Senegal
Singapore
Thailand
Viet Nam

Non-reporting countries

Afghanistan
Algeria
Andorra
Antigua and Barbuda
Austria
Bahrain
Barbados
Benin
Bhutan
Botswana
Brunei Darussalam
Cape Verde
Chad
Comoros
Congo
Croatia
Cyprus
Democratic People's Republic of Korea
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Ghana
Grenada
Guinea-Bissau
Hungary
Iceland
India
Iran (Islamic Republic of)
Iraq
Israel
Jordan
Kiribati
Kuwait
Lao People's Democratic Republic
Lebanon
Lesotho
Liberia
Libya
Liechtenstein
Madagascar
Malawi
Maldives
Mali
Malta
Marshall Islands
Mauritania
Micronesia (Federated States of)
Monaco
Mozambique
Namibia
Nauru
New Zealand
Niger
Norway
Oman
Pakistan
Palau
Poland
Qatar
Russian Federation
Rwanda
Saint Lucia
Samoa
San Marino
Sao Tome and Principe
Saudi Arabia
Slovakia
Solomon Islands
Somalia
South Africa
South Sudan
Swaziland
Syrian Arab Republic
Tonga
Trinidad and Tobago
Turkey
Turkmenistan
Tuvalu
Uganda
United Arab Emirates
United Republic of Tanzania
Venezuela (Bolivarian Republic of)
Zambia
Zimbabwe

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

MOVING FORWARD TOWARDS 2015: REDUCING SEXUAL TRANSMISSION BY 50%

Full and effective combination of available prevention strategies has conclusively demonstrated the capacity to rapidly reduce the number of people newly infected with HIV. To make the best use of these combination prevention options, countries need to closely focus on the driving forces and key populations at higher risk of their national epidemics. Behaviour change, biomedical interventions and structural approaches to reduce the underlying vulnerability to HIV infection should be implemented in concert for maximum impact.

Newly emerging evidence from Kenya and Malawi indicates that even quite small cash transfers can markedly affect the dynamics of sexual transmission of HIV. In Kenya, young people who received a cash transfer were less likely to have ever had sex and, when sexually active, less likely to have had more than two sexual partners in the past 12 months *(15)*. In Malawi, a cash transfer intervention led to significant declines in early marriage, teenage pregnancy and self-reported sexual activity *(16)*.

The promise of antiretroviral therapy in preventing HIV transmission, with well-established evidence in relation to mother-to-child transmission, has come into sharp focus during the past two years. In 2011, researchers reported that antiretroviral therapy reduces the odds of sexual transmission within serodiscordant heterosexual partners *(17)*, and in 2012 WHO issued guidelines on serodiscordant couples to recommend that the partner living with HIV be offered antiretroviral therapy regardless of his or her CD4 count *(18)*. In addition to the reduced transmission of HIV resulting from fully effective viral suppression among people living with HIV, trials have also indicated that antiretroviral medicines can reduce the likelihood that an uninfected person will acquire HIV. The potential public health impact of this strategy in reducing HIV incidence greatly depends on the extent to which potential HIV-uninfected users of antiretroviral medicines for prophylactic purposes are able to adhere to daily dosing regimens.

In priority countries in sub-Saharan Africa, additional steps are needed to accelerate the scaling up of voluntary medical male circumcision. Although some countries have reported strong demand for voluntary medical male circumcision where such services have been offered, generating robust demand for the service remains a challenge in other priority countries. Investing in community engagement and mobilization represents an urgent priority to accelerate scale-up. Intensive efforts are underway to evaluate potentially promising non-surgical devices for male circumcision. By avoiding the need for scalpels or sutures in circumcision, it is hoped that scale-up can be expedited through substituting trained nurses for surgeons, thus alleviating health worker shortages and reducing men's resistance

to undergoing the procedure. In 2012, field trials were underway in Rwanda and Zimbabwe for PrePex (a device that enables non-surgical and safe adult male circumcision) and in Kenya and Zambia for the Shang Ring (a circumcision tool that helps health care providers with limited training to perform circumcision). A new device for infants (AccuCirc) is also being evaluated in Botswana. Whether surgical or non-surgical, voluntary medical male circumcision is a procedure that has important cultural resonance, underscoring the need for a meaningful cultural discussion on the significance and benefits of circumcision.

Although encouraging progress has been made in stabilizing HIV prevalence and promoting condom use among workers in sex work, substantially greater gains will be needed to halve the sexual transmission of HIV among sex workers by 2015. Accurate estimates of the size and distribution of sex worker populations will assist countries in adhering to the "know your epidemic, know your response" approach to prevention planning. Programmatic experience has also shown that review and, where necessary, reform, of legal and policy frameworks to reduce stigma and discrimination towards sex workers can promote the increased use of prevention services.

Services to reduce the sexual transmission of HIV among transgender populations are also critical. The severe marginalization experienced by many transgender people, limited options for employment, persistent stigma and discrimination and, in many cases, targeted violence, are all factors that increase the vulnerability to HIV infection for this population (see Section 7 for additional information on transgender populations).

Reaching a higher proportion of men who have sex with men with effective programmatic efforts is critical if the world is to halve sexual transmission by 2015. This is one of many areas where the lack of domestic funding allocated towards sound programming not only jeopardizes the sustainability of these programmes but also suggests that a lack of national ownership is hampering the success of these efforts. HIV monitoring among men who have sex with men should be strengthened, and punitive legal frameworks should be revised to bring AIDS responses in accordance with human rights norms. In addition to efforts focused on HIV-related behaviour, access to antiretroviral therapy for men who have sex with men who are living with HIV and the potential use of pre-exposure prophylaxis should be combined together in a coordinated and accelerated effort to reduce the sexual transmission of HIV. Research to develop rectal microbicides should also continue as a potentially important measure for this population.

2 PEOPLE WHO INJECT DRUGS

The global goal of reducing the number of people who use drugs who acquire HIV infection by 50% by 2015 recognizes both the epidemic's extraordinary toll on this population and the fact that drug-related transmission is driving the expansion of the epidemic in many countries. Several countries that have implemented evidence-informed programmes for people who use drugs have dramatically reduced the number of these people who acquire HIV infection, with some countries approaching the elimination of drug-related transmission. However, globally we are far from halving the number of people who use drugs who are newly infected with HIV by 2015.

PEOPLE WHO INJECT DRUGS ARE EXTRAORDINARILY BURDENED

22×

People who inject drugs have 22 times the rate of HIV infection as the general population in 49 countries with available data.

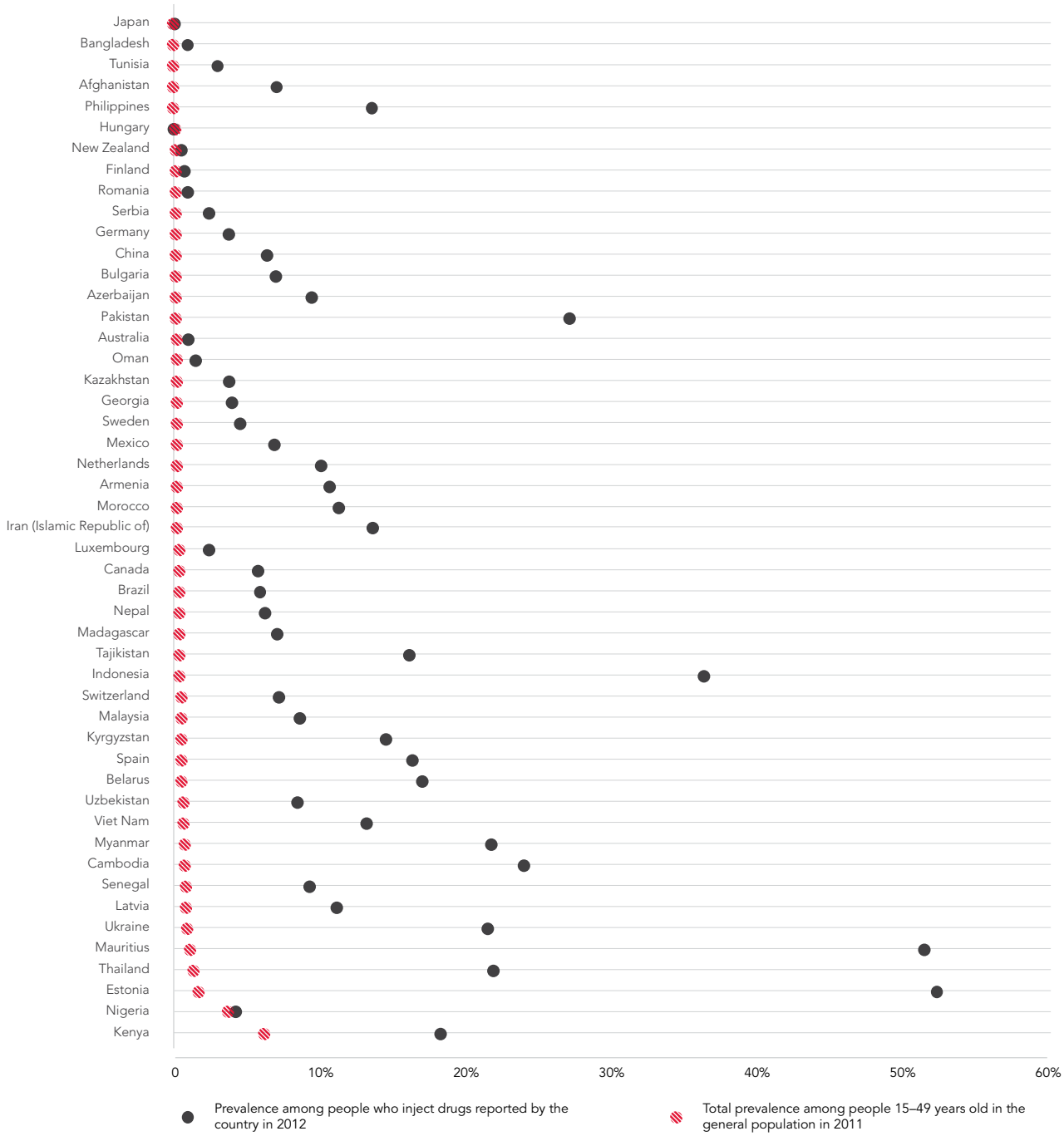
People who inject drugs are among the population groups most severely affected by HIV infection. In virtually all countries reporting data in 2012, the prevalence of HIV infection is higher among people who inject drugs than among the general population (Fig. 2.1). In 49 countries with available data, the prevalence of HIV infection is at least 22 times higher among people who inject drugs than for the population as a whole, with prevalence at least 50-fold higher in 11 countries. A 2007 study *(1)* estimated that about 16 million people inject drugs globally, including many younger than 25 years and 3 million of whom are living with HIV.

In addition to imposing extraordinary burdens on people who use drugs, drug-related transmission also undermines global efforts to lay the foundation for the eventual end of AIDS. In Eastern Europe and Central Asia, one of two regions where the number of people newly infected is rising, national epidemics are typically driven by drug use–related transmission and by further transmission to the sexual partners of people who use drugs.

Low- and middle-income countries, however, have had limited progress in slowing the spread of HIV among people who inject drugs. Nevertheless, transmission can be reduced substantially. Such countries as Australia and the United Kingdom that have implemented evidence-informed HIV prevention strategies have sharply reduced the number of people who inject drugs who acquire HIV infection, with some approaching the elimination of drug-related transmission.

Fig. 2.1

Prevalence of HIV infection among people who inject drugs versus the general population in countries with available data, most recent year



Sources: 2012 country progress reports (www.unaids.org/cpr) and UNAIDS estimates.

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative. Data is only shown for countries which have reported a sample size greater than 100.

EVIDENCE-INFORMED PROGRAMMES ARE BEING INADEQUATELY SCALED UP

According to country reports, nearly 80% of people who inject drugs reached in surveys in 49 capital cities have access to safe injecting equipment, with similar access reported for men and women. However, evidence from recently published studies *(2,3)* suggests that accessibility to needle and syringe programmes is low in most countries in which drug use among women is highly stigmatized and that access to any HIV services among women drug users remains very low compared with men drug users. In addition, country reports indicate that the scale of such programmes is inadequate, with most countries indicating that programmes annually provide fewer than 100 needles per person who injects drugs (Table 2.1).[1] A separate 2010 study *(4)* estimated that, globally, two needle-syringes (range 1–4) were distributed monthly per person who injects drugs per month, and another study *(5)* estimates that people who inject drugs only use sterile injecting equipment for 5% of injections globally.

Emerging evidence indicates that women who inject drugs may experience risks that are greater than for men who inject drugs *(6)*. In particular, women who inject drugs are more vulnerable to violence from intimate partners, police and sex-trade clients *(7)*. Combined with homelessness *(8)* and comorbid mental disorders *(9)*, these vulnerabilities may act synergistically to increase the risk of exposure to HIV. Clear evidence indicates that women who inject drugs and are living with HIV who become pregnant have a substantially lower likelihood of accessing services to prevent children from acquiring HIV infection than do other women living with HIV.

Countries also lag in scaling up other essential prevention measures for people who inject drugs (Tables 2.2 and 2.3). Reported condom use, for example, is lower among people who inject drugs reached in surveys in capital cities than for sex workers or men who have sex with men. Among 56 countries reporting data, the median condom use for people who inject drugs is 40% (30–48%), with only 3 countries reporting condom use above 75%.

HIV testing services are also failing to reach many people who inject drugs. Among 57 countries reporting, a median of 39% (22–60%) of people who inject drugs reached in surveys in capital cities reported having received an HIV test in the previous 12 months, with 8 countries reporting testing rates of at least 75%.

[1] Tracking the average number of needles distributed per person who injects drugs is difficult, since it requires reliably estimating the size of national populations using drugs.

Table 2.1

Number of syringes distributed through needle and syringe programmes per person who injects drugs, most recent year available

Low coverage <100

Afghanistan
Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Bulgaria
Cyprus
Georgia
Greece
Indonesia
Iran (Islamic Republic of)
Latvia
Lithuania
Mauritius
Mexico
Morocco
Nepal
Pakistan
Poland
Republic of Moldova
Romania
Senegal
Serbia
Seychelles
Sri Lanka
Switzerland
Tajikistan
Thailand
The former Yugoslav Republic of Macedonia
Tunisia
Ukraine

Medium coverage 100–200

Cambodia
China
Estonia
Hungary
Kazakhstan
Kyrgyzstan
Luxembourg
Malaysia
Myanmar
Uzbekistan
Viet Nam

High coverage >200

Australia
Bangladesh
Czech Republic
Finland
Madagascar
Malta
New Zealand
Norway
Sweden

Non-reporting countries with people who inject drugs[a]

Algeria
Andorra
Argentina
Austria
Bahamas
Bahrain
Bhutan
Bermuda
Bolivia (Plurinational State of)
Brazill
Brunei Darussalam
Canada
Chile
Colombia
Costa Rica
Côte d'Ivoire
Croatia
Denmark
Djibouti
Dominican Republic
Ecuador
Egypt
El Salvador
Fiji
France
Gabon
Germany
Ghana
Guatemala
Honduras
Iceland
India
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kenya
Kiribati
Kuwait
Lao People's Democratic Republic
Lebanon
Libya
Malawi
Maldives
Micronesia (Federated States of)
Monaco
Mongolia
Montenegro
Netherlands
Nicaragua
Nigeria
Oman
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Portugal
Qatar
Republic of Korea
Russian Federation
Samoa
San Marino
Saudi Arabia
Sierra Leone
Singapore
Slovakia
Slovenia
Solomon Islands
South Africa
Spain
Sudan
Suriname
Swaziland
Syrian Arab Republic
Taiwan, China
Timor-Leste
Togo
Tonga
Turkey
Uganda
Uruguay
United Arab Emirates
United Kingdom
United Republic of Tanzania
United States of America
Vanuatu
Venezuela (Bolivarian Republic of)
Yemen
Zambia

[a] Mathers BM et al. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. *Lancet*, 2010, 375:1014–1028.
Oman and Slovenia reported data on the number of syringes distributed but did not have available data on the estimated number of people who inject drugs.

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

Table 2.2

Reported HIV testing coverage among people who inject drugs, most recent year available

<25%

Afghanistan
Armenia
Azerbaijan
Bangladesh
Brazil
Georgia
Hungary
Iran (Islamic Republic of)
Malta
Montenegro
Morocco
Nepal
Nigeria
Pakistan
Philippines
Togo
Tunisia

25–49%

Albania
Australia
Bhutan
Bosnia and Herzegovina
Bulgaria
Cambodia
China
Czech Republic
Estonia
Germany
Mauritius
Mexico
Myanmar
Serbia
South Sudan
Sweden
Syrian Arab Republic
Tajikistan
Thailand
Ukraine
United States of America
Uzbekistan
Viet Nam

50–74%

Belarus
Finland
Kazakhstan
Kenya
Kyrgyzstan
Lithuania
Netherlands
Paraguay
Senegal
Switzerland
The former Yugoslav Republic of Macedonia

75–100%

Canada
Indonesia
Luxembourg
Malaysia
New Zealand
Romania
Seychelles

Non-reporting countries with people who inject drugs[a]

Andorra
Argentina
Armenia
Austria
Bahamas
Bahrain
Belgium
Bermuda
Bolivia (Plurinational State of)
Brunei Darussalam
Chile
Colombia
Costa Rica
Côte d'Ivoire
Croatia
Cyprus
Denmark
Djibouti
Dominican Republic
Ecuador
Egypt
El Salvador
Fiji
France
Gabon
Ghana
Greece
Guatemala
Honduras
Iceland
India
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kiribati
Kuwait
Lao Pople's Democratic Republic
Latvia
Lebanon
Libya
Malawi
Maldives
Micronesia (Federated States of)
Monaco
Mongolia
Nicaragua
Norway
Oman
Panama
Papua New Guinea
Peru
Poland
Portugal
Qatar
Republic of Korea
Republic of Moldova
Russian Federation
Samoa
San Marino
Saudi Arabia
Sierra Leone
Singapore
Slovakia
Slovenia
Solomon Islands
South Africa
Spain
Sri Lanka
Sudan
Suriname
Swaziland
Switzerland
Timor-Leste
Tonga
Turkey
Uganda
United Arab Emirates
United Kingdom
United Republic of Tanzania
Uruguay
Vanuatu
Venezuela (Bolivarian Republic of)
Yemen
Zambia

[a] Mathers BM et al. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. *Lancet*, 2010, 375:1014–1028.

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

Table 2.3

Reported coverage of condom use among people who inject drugs, most recent year available

<25%

Azerbaijan
Georgia
Iran (Islamic Republic of)
Kenya
Mauritius
Pakistan
Sweden
Tunisia
United States of America

25–49%

Afghanistan
Albania
Algeria
Armenia
Bangladesh
Bosnia and Herzegovina
Brazil
Bulgaria
Canada
China
Estonia
Germany
Hungary
Japan
Kazakhstan
Kyrgyzstan
Lebanon
Lithuania
Madagascar
Malaysia
Mexico
Montenegro
Morocco
Nepal
New Zealand
Paraguay
Senegal
Serbia
South Sudan
Switzerland
Tajikistan
Thailand
Togo
Ukraine
Uzbekistan

50–74%

Belarus
Bhutan
Indonesia
Latvia
Micronesia (Federated States of)
Nigeria
Romania
The former Yugoslav Republic of Macedonia
Viet Nam

75–100%

Cambodia
Myanmar
Seychelles

Non-reporting countries with people who inject drugs[a]

Andorra
Argentina
Australia
Austria
Bahamas
Belgium
Bermuda
Bolivia (Plurinational State of)
Brunei Darussalam
Chile
Colombia
Costa Rica
Côte d'Ivoire
Croatia
Cyrprus
Czech Republic
Denmark
Djibouti
Dominican Republic
Ecuador
Egypt
El Salvador
Fiji
Finland
France
Gabon
Ghana
Greece
Guatemala
Honduras
Iceland
India
Iraq
Ireland
Israel
Italy
Jordan
Kiribati
Kuwait
Lao People's Democratic Republic
Libya
Luxembourg
Malawi
Maldives
Malta
Monaco
Mongolia
Netherlands
Nicaragua
Norway
Oman
Panama
Papua New Guinea
Peru
Philippines
Poland
Portugal
Qatar
Republic of Korea
Republic of Moldova
Russian Federation
Samoa
San Marino
Saudi Arabia
Sierra Leone
Singapore
Slovakia
Slovenia
Solomon Islands
South Africa
Spain
Sri Lanka
Sudan
Suriname
Swaziland
Syrian Arab Republic
Timor-Leste
Tonga
Turkey
Uganda
United Arab Emirates
United Kingdom
United Republic of Tanzania
Uruguay
Vanuatu
Venezuela (Bolivarian Republic of)
Yemen
Zambia

[a] Mathers BM et al. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. *Lancet*, 2010, 375:1014–1028.

Source: 2012 country progress reports (www.unaids.org/cpr).

These data were reported in 2012, but countries may differ in methods. Surveys are usually conducted in capital cities and may not be nationally representative.

INSUFFICIENT LEADERSHIP IN THE RESPONSE TO AIDS AMONG PEOPLE WHO INJECT DRUGS

15%
DOMESTIC FUNDING

In Eastern Europe and Central Asia, domestic public sector sources provide only 15% of spending on prevention programmes for people who inject drugs.

Allocation of robust domestic resources is the clearest test of leadership in addressing the HIV-related needs of people who inject drugs. Although funding for HIV prevention programmes for people who inject drugs has increased – doubling between 2006–2007 and 2010–2011 in 18 countries for which data were available – most of this increase results from the efforts of international donors, which accounted for 92% of total HIV spending on people who inject drugs in 2010–2011. In most countries, domestic public sector sources have yet to give priority to funding programmes to address the HIV-related needs of people who inject drugs.

These patterns are especially apparent in Eastern Europe and Central Asia, which remains a key to future success in meeting the global goal of halving the number of people who inject drugs who acquire HIV infection by 2015. In all countries in the region, external donors account for at least 60% of spending on HIV prevention programmes for people who inject drugs. Regionally, the Global Fund to Fight AIDS, Tuberculosis and Malaria is responsible for prevention programming for people who inject drugs, with domestic public sector sources accounting for a mere 15% of such prevention spending.

For prevention services for people who inject drugs, the share of countries in which the majority of funding is from external donors is high in Eastern Europe and Central Asia (10 of 10) and in Asia and the Pacific (11 of 13). In all regions, only 8 of 43 countries[1] reporting spending for people who inject drugs by donor source provided more than 75% from domestic sources for prevention programming for this key population at higher risk. At a time when the Global Fund and the broader international donor community are rethinking their funding approaches – with numerous donors taking steps to refocus support on the most resource-limited countries – these patterns raise profound concerns regarding the sustainability of prevention programming for people who inject drugs and call for increased national ownership of these programmes, especially in middle-income countries.

[1] Afghanistan (2011), Angola (2011), Argentina (2009), Armenia (2011), Azerbaijan (2011), Bangladesh (2011), Belarus (2011), Brazil (2009), Bulgaria (2011), Burundi (2010), Cambodia (2009), Colombia (2011), Georgia (2011), Ghana (2010), Guatemala (2010), Haiti (2011), India (2011), Indonesia (2010), Jamaica (2010), Kazakhstan (2011), Kenya (2010), Kyrgyzstan (2011), Lao People's Democratic Republic (2011), Lithuania (2011), Madagascar (2011), Malaysia (2011), Mauritius (2010), Mexico (2009), Myanmar (2011), Nepal (2009), Nigeria (2010), Pakistan (2010), Philippines (2011), Republic of Moldova (2011), Romania (2011), Sri Lanka (2010), Swaziland (2009), Tajikistan (2011), Thailand (2011), the former Yugoslav Republic of Macedonia (2010), Ukraine (2010), Uzbekistan (2011) and Viet Nam (2010).

HALVING THE NUMBER OF PEOPLE WHO INJECT DRUGS ACQUIRING HIV INFECTION: TOWARDS 2015

Available evidence indicates that the world is far from being on track to achieve the global target for people who inject drugs. Substantially stronger commitment is urgently needed to bring evidence-informed responses to scale. As many countries fail to report data on HIV and people who inject drugs, immediate steps are needed to improve the reporting of sex-aggregated epidemiological and HIV service coverage data for this population, with the aim of ensuring reliable national estimates of the total number of people who inject drugs. Countries that do not currently address the needs of people who inject drugs in their national AIDS strategies should take immediate steps to rectify this. Governments must urgently commit major new resources to comprehensive evidence-informed prevention programmes for people who inject drugs and intensify efforts to increase the scale of HIV testing, opioid substitution therapy needle distribution and condom use.

Fig. 2.2

HIV spending on people who inject drugs
18 low- and middle-income countries with available data, latest year available

Source: 2012 country progress reports (www.unaids.org/cpr).

3 HIV INFECTION AMONG CHILDREN AND KEEPING THEIR MOTHERS ALIVE

The world has embarked on an historic effort to end new HIV infections among children and reduce the number of women living with HIV who die from pregnancy-related causes. Stakeholders have joined together to develop the Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive *(1)*. In 2011, the world made additional progress in advancing towards the 2015 goal, generating significant confidence in the feasibility of eliminating new infections among children by 2015.

THE NUMBER OF CHILDREN NEWLY INFECTED WITH HIV CONTINUES TO DECLINE

409 000

In the three years 2009 to 2011, antiretroviral prophylaxis prevented 409 000 children from acquiring HIV infection in low- and middle-income countries.

In 2011, 330 000 [280 000–390 000] children acquired HIV infection. This represents a 43% decline since 2003 (when 560 000 [510 000–650 000] children became newly infected) and a 24% drop since 2009 (when 430 000 [370 000–490 000] children acquired HIV infection).

More than 90% of the children who acquired HIV infection in 2011 live in sub-Saharan Africa. There, the number of children newly infected fell by 24% from 2009 to 2011. The number of children acquiring HIV infection also declined significantly in the Caribbean (32%) and Oceania (36%), with a more modest decline in Asia (12%). Declines have also been modest in Latin America (24%), Eastern Europe and Central Asia (13%). However, these three regions had already significantly reduced the numbers of children newly acquiring HIV infection. The Middle East and North Africa is the only region that has yet to see a reduction in the number of children newly infected.

In countries with generalized epidemics that account for the overwhelming majority of the children newly infected, major gains have occurred during the past decade. In six countries (Burundi, Kenya, Namibia, South Africa, Togo and Zambia), the number of children newly infected declined by 40–59% from 2009 to 2011. In 16 additional countries, declines of 20–39% occurred during the same period.

Table 3.1

Percentage decrease between 2009 and 2011 in the number of children (0–14 years old) acquiring HIV infection in countries with generalized epidemics

Increased	1–19%	20–39%	40–59%
Angola	Benin	Botswana[a]	Burundi
Congo	Burkina Faso	Cameroon	Kenya
Equatorial Guinea	Central African Republic	Côte d'Ivoire	Namibia
Guinea-Bissau	Chad	Ethiopia	South Africa
	Djibouti	Ghana	Togo
	Eritrea	Guinea	Zambia
	Gabon	Haiti	
	Mozambique	Lesotho	
	Nigeria	Liberia	
	South Sudan	Malawi	
	United Republic of Tanzania	Papua New Guinea	
		Rwanda	
		Sierra Leone	
		Swaziland	
		Uganda	
		Zimbabwe	

Sources: UNAIDS estimates.

[a] Note: the baseline year for the Global Plan is 2008. Some countries had already made important progress in reducing the number of new HIV infections among children in the years before 2009, notably Botswana which, by 2009, already had 92% coverage of antiretroviral medicines among pregnant women. In countries with high coverage, further declines in HIV infections among children are harder to achieve.

Progress has not been universally apparent, however, underscoring the importance of intensified action to achieve the global goal of zero new infections among children by 2015. In 11 countries, the number of children newly infected has declined modestly by 1–19% since 2009, and this has actually increased in four countries: Angola, Congo, Equatorial Guinea and Guinea-Bissau (Table 3.1).

Although reductions in the number of adults acquiring HIV infection are helping to lower children's risk of acquiring HIV, recent gains in bringing antiretroviral- and infant feeding–based prevention services to scale are primarily responsible for the sharp reductions in the number of children newly infected. From 2009 to 2011, antiretroviral prophylaxis prevented 409 000 children from acquiring HIV infection in low- and middle-income countries.

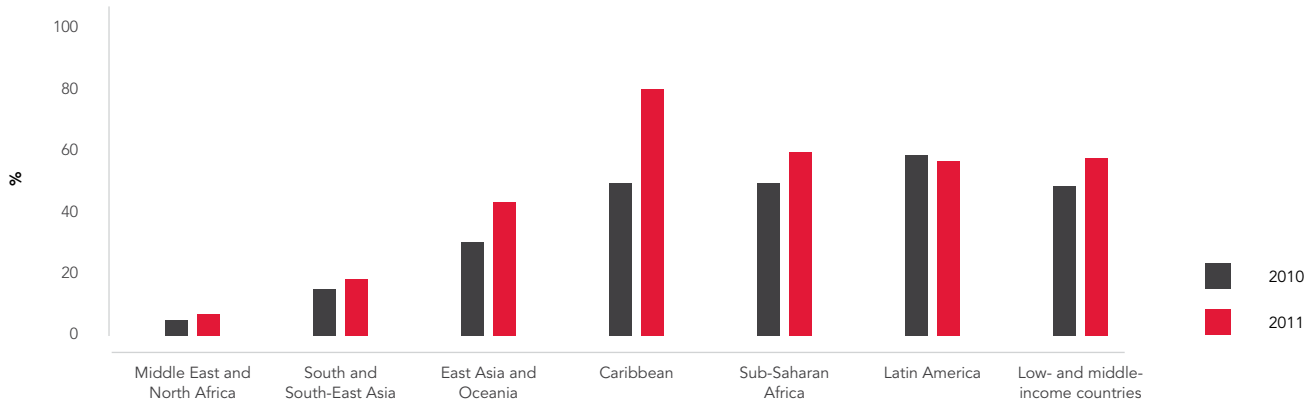
A BLUEPRINT TO ELIMINATE NEW HIV INFECTIONS AMONG CHILDREN

Four key actions are recommended to reduce the number of children acquiring HIV infection: (1) strengthen primary HIV prevention services to ensure that reproductive-age women and their partners avoid HIV infection, (2) take steps (such as providing contraceptives and counselling) to meet the unmet need for family planning among women living with HIV, (3) provide HIV testing, counselling and antiretroviral medicines in a timely manner to pregnant women living with HIV to prevent transmission to their children and (4) ensure proper and timely HIV care, treatment and support for women living with HIV, children living with HIV and their families.

With respect to preventing children from acquiring HIV infection, the state of the art is rapidly evolving, as new evidence emerges regarding the most effective methods of reducing the risk of transmission. Similarly, countries need to adapt existing systems and approaches as new evidence becomes available. Critical decisions include whether to maintain lifelong triple antiretroviral therapy for pregnant women living with HIV who initiate treatment at CD4 counts above 350 per ml, whether to include efavirenz in combination regimens for pregnant women and the type and duration of recommended infant-feeding practices to maximize prevention benefits for the child.

Fig. 3.1

Percentage of pregnant women living with HIV receiving effective antiretroviral regimens for preventing mother-to-child transmission, by region, 2010 and 2011



Coverage for Eastern Europe and Central Asia is not reported because the data have not been completely validated.

Sources: 2012 country progress reports (www.unaids.org/cpr) and UNAIDS estimates.

PROVIDING SERVICES TO THE PEOPLE WHO NEED THEM

Little evidence indicates that programmes to reduce unintended pregnancies have substantially changed since the advent of programmes to prevent children from acquiring HIV infection. Only 5 of 15 countries in sub-Saharan Africa with available national household surveys showed a decline of more than 5 percentage points in the unmet need for family planning between 2000 and 2011.

In low- and middle-income countries, coverage of effective antiretroviral regimens for preventing mother-to-child transmission reached 57% [51–64%] in 2011. Although high-income countries have long maintained near-universal coverage for antiretroviral medicines for pregnant women, only the Caribbean has approached similarly high coverage levels at 79% [67–97%] (Fig. 3.1). In sub-Saharan Africa, home to 92% of pregnant women living with HIV, the percentage of pregnant women living with HIV who received antiretroviral therapy or prophylaxis is now 59% [53–66%]. Reported coverage is believed to be substantially lower in South and South-East Asia (18% [13–23%]) and in the Middle East and North Africa (7% [6–9%]). However, the fertility patterns among women in the populations with behaviour that increases the risk of HIV transmission are not well understood in countries with concentrated epidemics, creating difficulty in estimating service coverage because of difficulty in estimating the number of pregnant women living with HIV in such settings.

Table 3.2

Percentage of pregnant women receiving antiretroviral regimens (excluding single-dose nevirapine) for preventing mother-to-child transmission in countries with a generalized epidemic, 2011

<25%	25–49%	50–74%	75–100%
Angola	Benin	Burundi	Botswana
Chad	Burkina Faso	Cameroon	Ghana
Congo	Central African Republic	Côte d'Ivoire	Haiti
Djibouti	Gabon	Kenya	Namibia
Eritrea	Guinea	Lesotho	South Africa
Ethiopia	Guinea-Bissau	Liberia	Swaziland
Nigeria	Papua New Guinea	Malawi	Zambia
South Sudan		Mozambique	
		Rwanda	
		Sierra Leone	
		Togo	
		Uganda	
		United Republic of Tanzania	
		Zimbabwe	

Sources: 2012 country progress reports (www.unaids.org/cpr) and UNAIDS estimates.

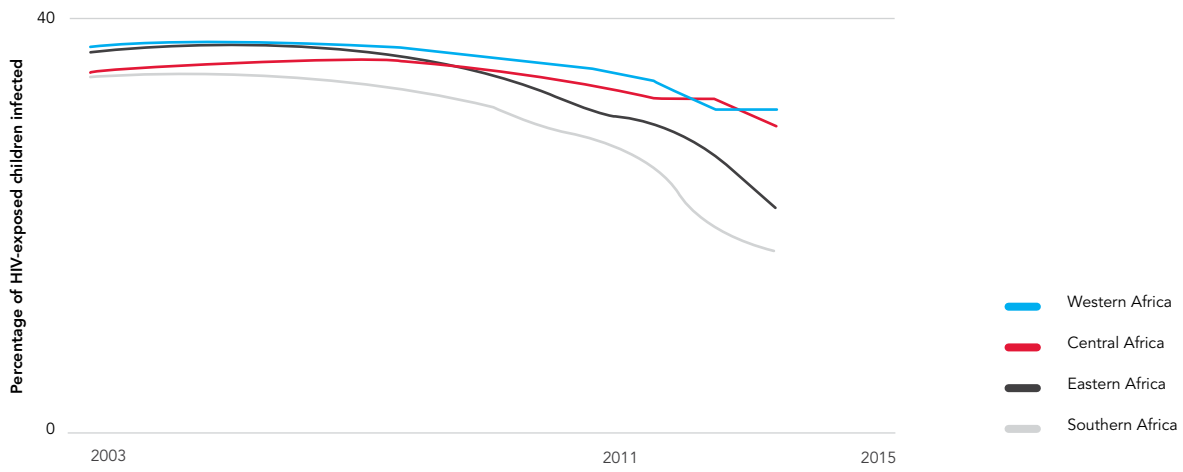
The percentage of pregnant women and infant pairs receiving antiretroviral medicines to prevent mother-to-child transmission exceeds 50% in most countries with generalized epidemics and available data. Coverage of antiretroviral regimens exceeds 75% in 8 countries with generalized epidemics, with an additional 13 countries reporting coverage from 50% to 74% (Table 3.2).

In breastfeeding populations, providing antiretroviral medicines to the mother or the infant during breastfeeding is also critically important for avoiding transmission to the child *(2)*. Among the 21 Global Plan priority countries in sub-Saharan Africa, the proportion of pairs of women living with HIV and infants provided with prophylaxis during breastfeeding has increased since 2009.

Fig. 3.2 illustrates transmission rates among children in different sub-regions of sub-Saharan Africa. As the results demonstrate, some regions have made strong progress: southern Africa, the subregion in sub-Saharan Africa with the highest coverage of services to prevent children from acquiring HIV infection, has achieved the lowest post-breastfeeding transmission rate (17%). The central and western Africa subregion, by contrast, still has transmission rates close to 30% because of lower service coverage, especially for prophylaxis during the breastfeeding period.

Fig. 3.2

Trends in mother-to-child transmission rates by subregion in sub-Saharan Africa, 2000–2011



Source: UNAIDS estimates.

For the children who do become infected with HIV, international guidelines recommend that all children younger than two years start immediately on antiretroviral therapy, whereas older children follow different guidelines based on their CD4 levels *(3)*. In 2011, only 28% [25–31%] of children 0–14 years old who were eligible were receiving the life-saving medicines. Depending on the age of the child when infected, this could mean death within less than one year *(4)*.

Ensuring treatment access for mothers living with HIV benefits not only mothers themselves but also their children, since studies indicate that children whose mothers die also have an increased risk of death regardless of the child's HIV status. The percentage of treatment-eligible pregnant women living with HIV who are receiving antiretroviral therapy for their own health in 2011 was 30% [27–32%] – lower than the estimated coverage for all adults eligible for antiretroviral therapy (according to WHO guidelines) of 54% [51–59%]. Qualitative research is needed to determine why, despite higher levels of access to health care, pregnant women are not starting, or being reported to start, antiretroviral therapy. Recent estimates suggest that pregnancy-related deaths among women living with HIV have declined from 46 000 in 2005 to an estimated 37 000 in 2010. More effort is needed to ensure that pregnant women tested for HIV during antenatal care are also tested for eligibility for antiretroviral therapy.

Since pregnant women living with HIV have a much higher risk of developing TB, TB screening, prevention and infection control are integral components of the package of care for eliminating mother-to-child transmission. The risk of developing active TB is more than 10 times higher among pregnant women living with HIV than among HIV-negative pregnant women. In addition, TB is associated with a range of extremely poor obstetric and perinatal outcomes, including more than double the risk of HIV transmission to the unborn child, a 2.2- to 3.2-fold increased risk of maternal mortality and a 3.4-fold increased risk of infant mortality *(5)*. Since antiretroviral therapy reduces the risk of TB by 65% irrespective of CD4 count, combining early antiretroviral therapy with regular TB screening at each health visit helps ensure that eligible mothers are provided isoniazid preventive treatment or early treatment for active TB, giving both mother and child a much better chance of survival.

Pregnant women living with HIV in humanitarian crisis settings are at particular risk. To reach the objective of no child born with HIV infection and keeping their mothers alive, humanitarian actors should scale up prevention services and ensure that forcibly displaced women have access to HIV prevention services, treatment, care and support.

30%

TREATMENT COVERAGE

Only 30% of eligible pregnant women were receiving antiretroviral therapy for their own health in 2011, compared with 54% for all eligible adults.

NATIONAL POLICIES NEED STRENGTHENING

Among the 22 priority countries included in the Global Plan,[1] 21 have developed national targets for preventing children from becoming newly infected with HIV and have aligned their national strategies with the elements of the Global Plan. However, available evidence reveals persistent shortcomings in policy frameworks and clinical practices in many of these countries. In 2011, for example, 32 countries (including 12 countries with a high burden of HIV infection) reported they were still providing some pregnant women with suboptimal single-dose nevirapine regimens for preventing children from acquiring HIV infection.

Although breastfeeding is the norm throughout most of sub-Saharan Africa and many other parts of the world, only 10 of 43 countries in this region reported the number of breastfeeding women or infants who were receiving antiretroviral prophylaxis during breastfeeding. These disappointing results may be partly explained by weak reporting mechanisms, but they are also likely to reflect challenges that countries are experiencing in linking breastfeeding women with needed services and support at both the facility and community levels.

National and global leadership in the quest to eliminate new infections among children also needs to improve. Thirteen of the 22 Global Plan priority countries reported on trends in spending on services to prevent children from becoming newly infected with HIV between 2008 and 2010. The resources dedicated to programmes to prevent children from acquiring HIV infection has increased in some countries (Botswana, Burundi, Cameroon, Ghana and Kenya), but declines in funding (Angola, Chad and Namibia) or inconsistent spending patterns (the Democratic Republic of the Congo, India, Lesotho and Nigeria) are reported elsewhere, according to reported AIDS spending data.

ELIMINATING NEW HIV INFECTIONS AMONG CHILDREN AND KEEPING THEIR MOTHERS ALIVE: TOWARDS 2015

Achieving 57% coverage of services to prevent children from acquiring HIV infection represents a major accomplishment. However, reaching the global goal of eliminating new HIV infections among children by 2015 will require not only accelerated efforts to bring services to prevent children from acquiring HIV infection to scale but also steps to ensure that all programmatic elements of the Global Plan are fully implemented. In particular, reaching global goals will be impossible without preventing reproductive-age women from acquiring HIV infection and enabling women living with HIV to make decisions about their reproductive life. The most effective prophylactic regimens must be used, and prevention efforts must extend beyond the antenatal period to

[1] The Global Plan priority countries include: Angola, Botswana, Burundi, Cameroun, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, India, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

encompass the duration of breastfeeding as well *(6)*. Early diagnosis and treatment will be critical for improving the survival of children exposed to HIV and for ensuring high-quality programmes. Partners will need to collaborate to retrain nurses and ensure that all clinical settings have access to essential medicines.

Intensified efforts are needed to deliver timely, high-quality treatment and care to women living with HIV. An estimated 70% [68–73%] of pregnant women with CD4 counts below 350 per ml are not receiving antiretroviral therapy – a pattern that undermines women's health as well as global efforts to prevent transmission to their children.

Growing evidence indicates the wisdom of continuing to provide mothers living with HIV with the same combination regimens they take as prophylaxis during pregnancy for the remainder of their lives (Option B+). This approach has the potential to reduce transmission rates for future births, lower the odds of transmission to sexual partners, improve maternal survival and promote simplified treatment regimens *(7)*. It is essential that this be implemented with the informed consent of the women concerned and in a rights-based manner.

2.5×

Children of mothers in marginalized populations experience HIV transmission nearly 2.5 times higher than in the general population.

Integrating comprehensive prevention and antiretroviral services with maternal, neonatal and child health services will improve the efficiency and effectiveness of all interventions. By packaging services, women are more likely to obtain the services they require and service efficiency will be enhanced *(8)*. Service integration is especially important in countries with generalized HIV epidemics, since HIV care is a substantial burden for already weak health care systems.

Additional efforts are also needed to minimize social and structural impediments to scaling up. Community programmes that mentor mothers, support disclosure, promote the involvement of men and boys and reduce stigma and discrimination are all critical to promote access to essential services and retain families in care. In addition, even in countries that have reached high levels of service coverage, concerted efforts are needed to reach the most marginalized and vulnerable populations, such as women who use drugs, women who sell sex, women in prison, illegal migrants and ethnic minorities. The marginalized groups, who are often missed by mainstream maternal and child health services, experience rates of HIV transmission from mother to child that are nearly 2.5 times higher than that of the general population *(9)*.

Involving affected communities, innovation and commitment will be required to alleviate the stigma that would deter women living with HIV and vulnerable women from attending antenatal care. Recognizing the unique opportunity to eliminate new HIV infections among children by 2015, national and international partners also need to ensure that competing health priorities do not crowd out essential support for HIV prevention services.

4 TREATMENT

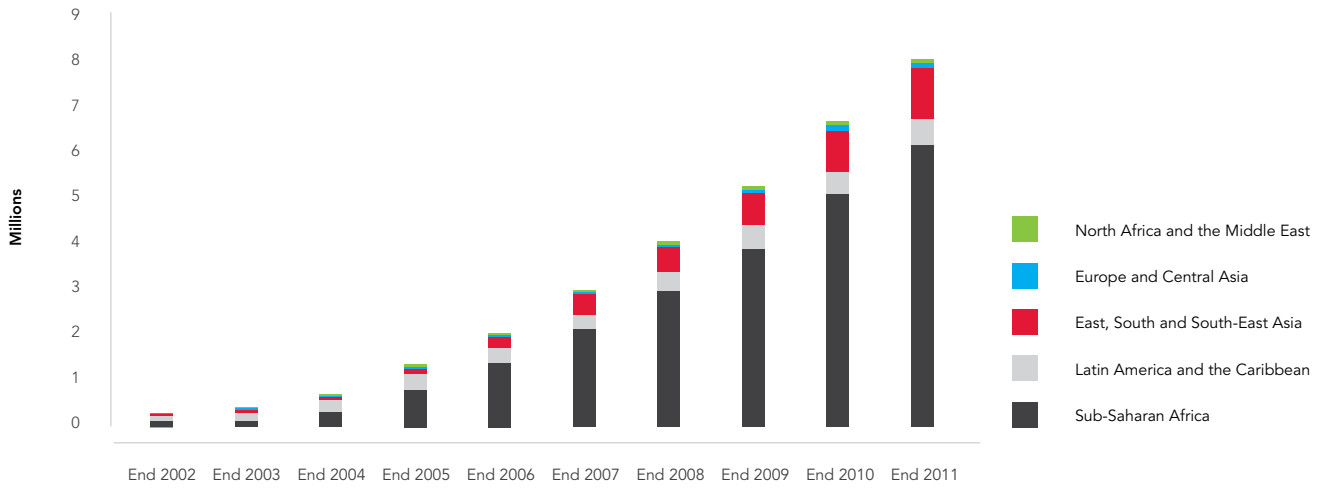
The rapid expansion of antiretroviral therapy – one of the most remarkable achievements in recent public health history – continued in 2011. More people initiated antiretroviral therapy in 2011 than in any previous year, with the number of people living with HIV receiving treatment rising by 21% compared with 2010 based on data from country progress reports. Expanding coverage is saving lives, since about half of the people with a CD4 count less than 350 per ml, the current threshold for initiating treatment, would be expected to die within two years if they did not get antiretroviral therapy. This accelerating pace needs to be sustained if the world is to achieve the goal of reaching 15 million people with HIV treatment by 2015.

PROMISING TRENDS IN TREATMENT COVERAGE

Antiretroviral therapy reached 8 million people by the end of 2011 – a 20-fold increase since 2003 (Fig. 4.1). Since 1995, antiretroviral therapy has added 14 million life-years in low- and middle-income countries, including 9 million in sub-Saharan Africa.

Fig. 4.1

Number of people receiving antiretroviral therapy in low- and middle-income countries, by region, 2002–2011



Source: 2012 country progress reports (www.unaids.org/cpr).

In 2011, for the first time, a majority (54%) of people eligible for antiretroviral therapy in low- and middle-income countries were receiving it. Latin America (68%), the Caribbean (67%), and Oceania (69%) had the highest coverage. Coverage in sub-Saharan Africa is modestly higher than the global average, with 56% of eligible individuals receiving therapy. Coverage remains low in Eastern Europe and Central Asia (25%) and in the Middle East and North Africa (15%).

The number of countries achieving at least 80% treatment coverage increased from 7 in 2009 to 10 in 2011, and the number of countries with coverage less than 20% fell from 28 in 2009 to 10 in 2011. This represents real progress, although the fact that fewer than 1 in 5 people who are eligible for treatment receive it in 10 countries demands urgent attention.

Antiretroviral therapy coverage remains higher for women (68%) than for men (47%) in low- and middle-income countries. The treatment access gap for children also persists, with global coverage much lower for children (28%) than for adults (58%). Forty-two countries provide antiretroviral therapy to fewer than 1 in 5 treatment-eligible children, versus 10 with adult treatment coverage less than 20%. However, more countries have achieved 80% antiretroviral coverage for children (18) than have reached this goal for adults (14).

Access and continuity of HIV treatment remains an important issue for populations affected by humanitarian crises. In 2011, 93% of refugees in Asia, Africa, Latin America and the Middle East and North Africa had access to antiretroviral therapy at a level similar to that of the surrounding population.

28%

COVERAGE FOR CHILDREN

HIV treatment coverage is 68% for women and 47% for men in low-and middle-income countries, compared with 28% for children worldwide.

IMPROVING PROGRAMME OUTCOMES

Compelling evidence indicates that programme implementers are benefiting from lessons learned over the past decade to enhance the success of treatment initiatives. Task-shifting and declining drug costs allow treatment to be delivered to more individuals with the same finite resources. In Mozambique, enhanced programme monitoring helped to reduce the costs of antiretroviral therapy per person by 45% from 2009 to 2011 *(1)*. According to a 2012 study by the Clinton Health Access Initiative of more than 160 clinics in five countries in sub-Saharan Africa *(2)*, the cost per person of delivering HIV treatment has steadily declined over time.

FURTHER REDUCING TREATMENT COSTS

In addition to reducing per-person treatment costs by enhancing programme management, efforts are also needed to further reduce the cost of antiretroviral medicines. Countries, with the support of international partners, should take steps to build local pharmaceutical capacity and take full advantage of the flexibilities permitted under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement. As recommended by the WHO Consultative Expert Working Group, urgent attention should focus on developing innovative funding mechanisms to spur additional health research and development for HIV and other health problems confronting low- and middle-income countries, with particular attention to developing affordable new tools to address priority health issues.

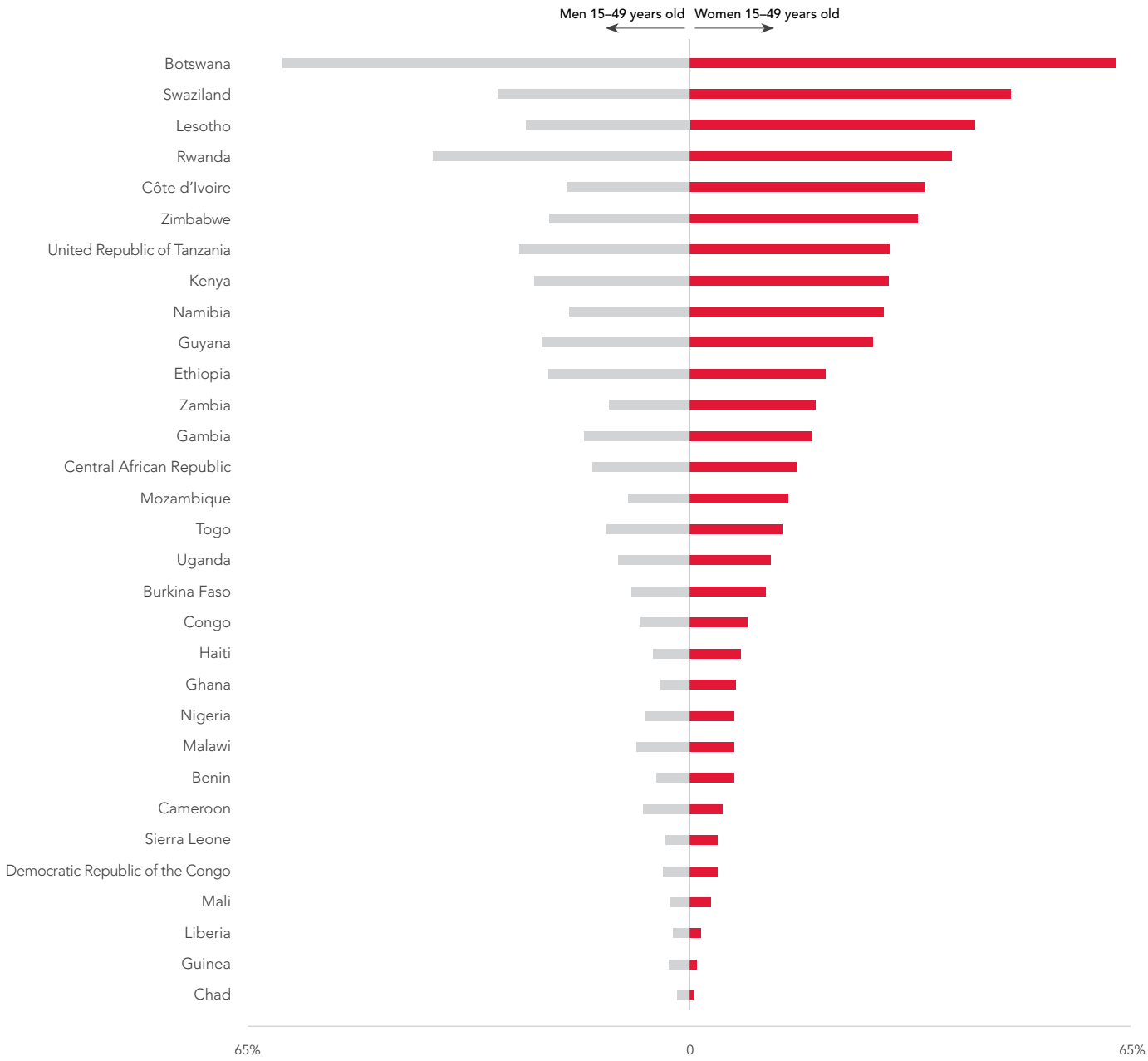
ENGAGING COMMUNITIES IN THE PUSH TO EXPAND TREATMENT ACCESS

Treatment 2.0, a programmatic approach to catalyse the next phase of HIV treatment, calls for the full involvement of people living with HIV and affected communities in planning, implementing and evaluating high-quality, rights-based HIV care and treatment programmes. Community leadership has the potential to generate robust, sustainable demand for treatment services and to improve treatment adherence and other treatment-related outcomes. Although a recent review of available experience indicated that 70% of the people in clinic-based treatment programmes in sub-Saharan Africa were still receiving antiretroviral therapy two years after initiating treatment, two-year retention rates rose to 98% in a programme in Mozambique that used community support strategies to complement clinical services. UNAIDS is working to build the evidence base for community involvement to strengthen programmes for HIV care and treatment.

Efforts are underway to improve results at each stage of the treatment continuum. Surveys conducted between 2004 and 2011 in 14 countries in sub-Saharan Africa show that the percentage of adults who received an HIV test in the previous 12 months has significantly increased as antiretroviral therapy programmes have been scaled up and as countries have invested in a broader array of testing strategies, such as provider-initiated testing and counselling, rapid testing technologies and home-based testing campaigns (Fig. 4.2). Innovative approaches, including multi-disease prevention campaigns in Kenya and Uganda, have demonstrated the feasibility and potential of community-based testing approaches. In 14 countries studied in sub-Saharan Africa, testing rates tend to be higher among women than among men, perhaps in part because of the increased availability of testing in antenatal settings. Although the trend towards increased population-based testing rates is encouraging, the available evidence does not conclusively demonstrate that testing programmes are reaching the age and population cohorts at highest risk.

Fig. 4.2

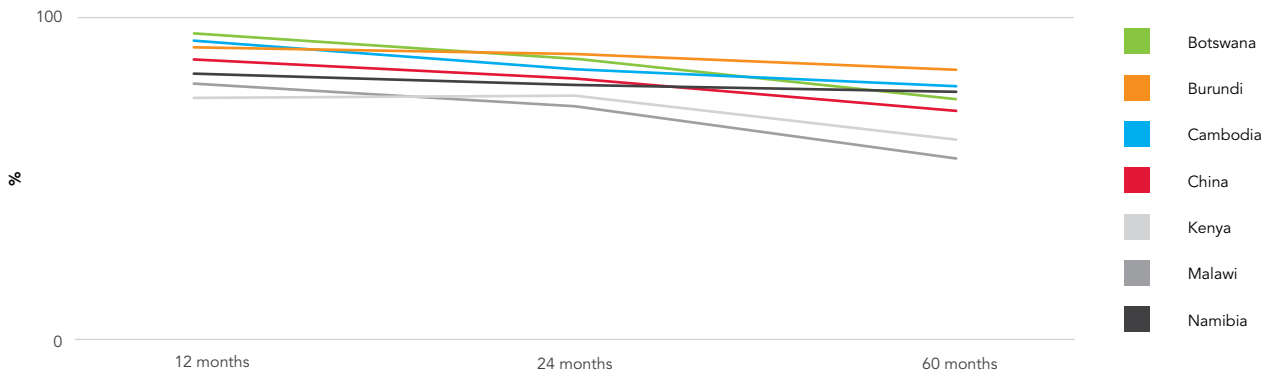
Percentage of women and men aged 15–49 years who received an HIV test in the past 12 months and received their results, 2004-2011



Source: Demographic and Health Surveys (www.measuredhs.com).

Fig. 4.3

Retention rate for antiretroviral therapy at 12, 24 and 60 months in selected countries, 2012 country reports



Source: 2012 country progress reports (www.unaids.org/cpr).

IMPROVING RETENTION ON TREATMENT

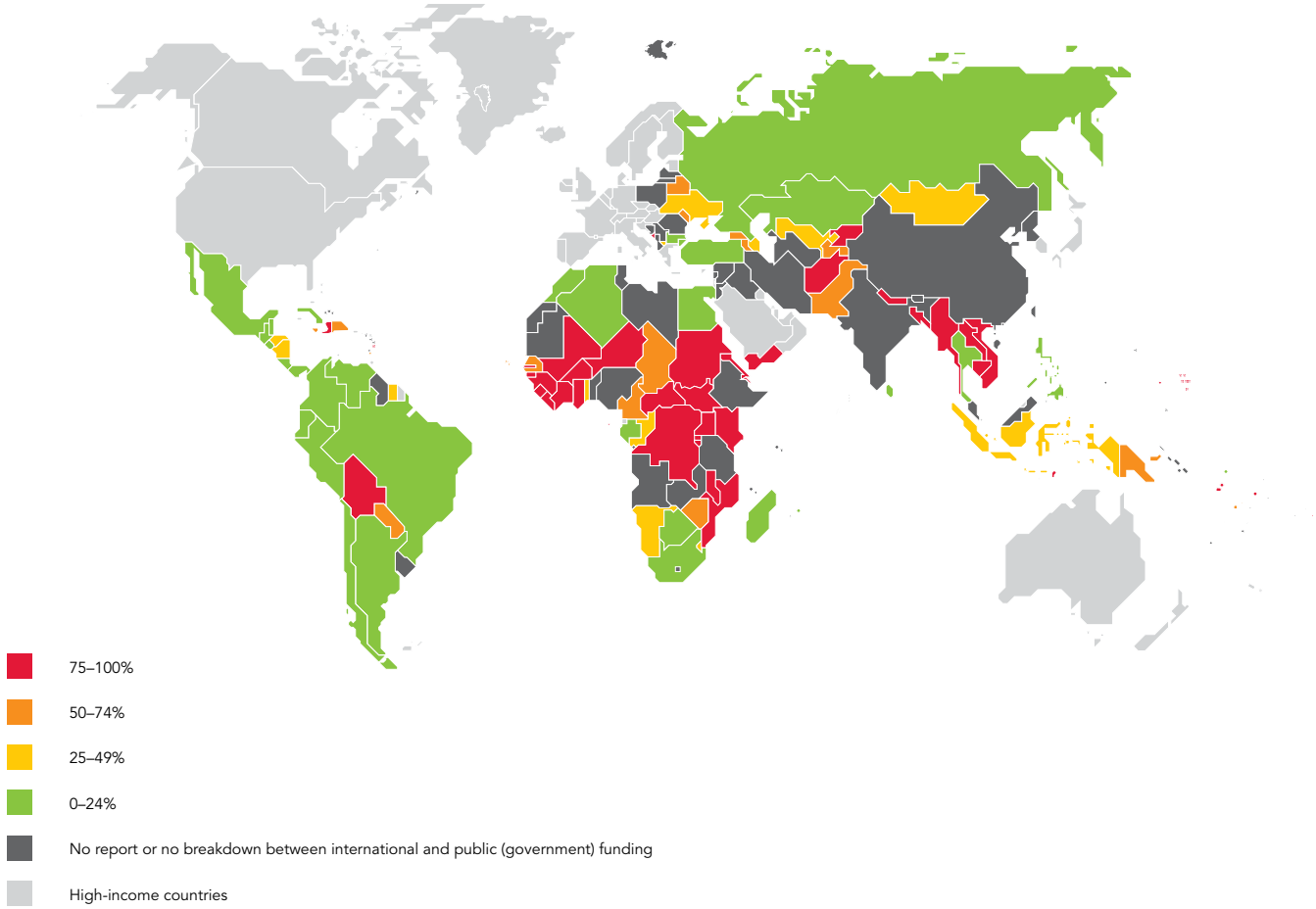
The evidence continues to highlight the urgent need to improve retention rates for people enrolled in HIV care and treatment. Nearly half of all people who initiated antiretroviral therapy at the same treatment centre in Malawi are no longer in care five years later, and this proportion is nearly 40% in Kenya (Fig. 4.3). Drawing reliable conclusions on trends in retention rates is difficult, since few countries produce consistent nationwide data that permit this to be tracked over time, and continued reporting for people who transfer to other centres is a major obstacle.

GLOBAL RELIANCE ON AID FOR TREATMENT

Despite considerable efforts to increase domestic funding, many countries rely highly on international aid for treatment, care and support (Fig. 4.4). International funding accounted for more than half of the spending in 59 countries and for more than 75% in 43 of the 102 low- and middle-income countries that reported at least once on the share of international and public (government) spending on treatment from 2007 to 2011.

Fig. 4.4

Share of care and treatment expenditure originating from international assistance, low- and middle-income countries, 2007–2011



Source: 2012 country progress reports (www.unaids.org/cpr).

REACHING 15 MILLION PEOPLE WITH HIV TREATMENT BY 2015: MOVING FORWARD TOWARDS 2015

At the current annual pace at which treatment is being scaled up, reaching 15 million people with antiretroviral therapy by 2015 is feasible. However, reaching this target will require intensified efforts to improve the efficiency and effectiveness of treatment programmes.

Maximizing the therapeutic and preventive benefits of treatment requires substantially greater success in closing gaps in the treatment continuum. People living with HIV need to be diagnosed early in the course of infection through testing services that are simple and easy to access, those who test positive must be linked to care that they can easily access and swiftly evaluated, antiretroviral therapy must be initiated in a timely manner, people must be retained in treatment programmes and individuals must receive support in adhering to prescribed regimens. Drug supply systems must become more reliable, programmes must better leverage opportunities to link treatment to other programmes (such as couples counselling and testing, initiatives for voluntary medical male circumcision and opioid substitution therapy) and communities need to be better engaged in supporting treatment initiatives.

Further reducing the cost of antiretroviral therapy will be essential, especially for the second- and third-line regimens that will increasingly be needed in future years. Strategies to manage intellectual property that are oriented towards public health goals, such as the full use, as required, of flexibilities permitted under international regulations such as the Agreement on Trade-Related Aspects of Intellectual Property Rights administered by the World Trade Organization, will play a critical role. International actors should avoid provisions in free-trade agreements that potentially undermine access to affordable, life-saving medicines and health technologies.

Intensified efforts are needed to improve treatment coverage among children, especially those who are youngest and most vulnerable, and to reach more men earlier with HIV testing and treatment services in high-prevalence settings. Health systems need to be more responsive to the needs of vulnerable populations. Health reporting systems need to be strengthened to monitor treatment retention by age and sex. Finally, greater efforts are needed to speed the next phase of HIV treatment by accelerating implementation research and heeding the lessons learned in different parts of the world (Table 4.1).

Table 4.1

Proportion of eligible people receiving antiretroviral therapy in selected low- and middle-income countries at the end of 2011[a]

<20%

Afghanistan
Bolivia (Plurinational State of)
Iran (Islamic Republic of)
Latvia
Madagascar
Pakistan
Somalia
Sudan
South Sudan
Yemen

20–39%

Algeria
Angola
Armenia
Azerbaijan
Bangladesh
Bhutan[b]
Bulgaria
Central African Republic
Chad
Djibouti
Egypt
Indonesia
Kazakhstan
Kyrgyzstan
Lebanon
Liberia
Lithuania[b]
Malaysia
Mauritania
Mauritius
Morocco
Myanmar
Nepal
Niger
Nigeria
Republic of Moldova
Russian Federation
Sri Lanka
Tajikistan
Ukraine

40–59%

Burkina Faso
Burundi
Cameroon
Cape Verde
Colombia
Congo
Côte d'Ivoire
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guatemala
Guinea
Guinea-Bissau
Haiti
Honduras
India
Lao People's Democratic Republic
Lesotho
Mali
Mozambique
Panama
Philippines
Sao Tome and Príncipe[b]
Senegal
Sierra Leone
Suriname
Togo
Turkey
Uganda
United Republic of Tanzania
Uruguay
Viet Nam

60–79%

Argentina
Belize
Benin
Brazil
Chile
Ecuador
El Salvador
Georgia
Jamaica
Kenya
Malawi
Nicaragua
Papua New Guinea
Paraguay
Peru
Romania
Serbia
South Africa
Thailand
Tunisia
Venezuela (Bolivarian Republic of)
Zimbabwe

≥80%

Botswana
Cambodia
Cuba
Dominican Republic
Guyana
Mexico
Namibia
Rwanda
Swaziland
Zambia

[a] The table does not include countries with fewer than 100 people who need antiretroviral therapy.
[b] Countries with an estimated antiretroviral therapy need of less than 1000 people. The data for these countries should be interpreted cautiously because of how ranges of uncertainty affect the estimates.

Source: UNAIDS estimates.

5 TUBERCULOSIS AND HIV

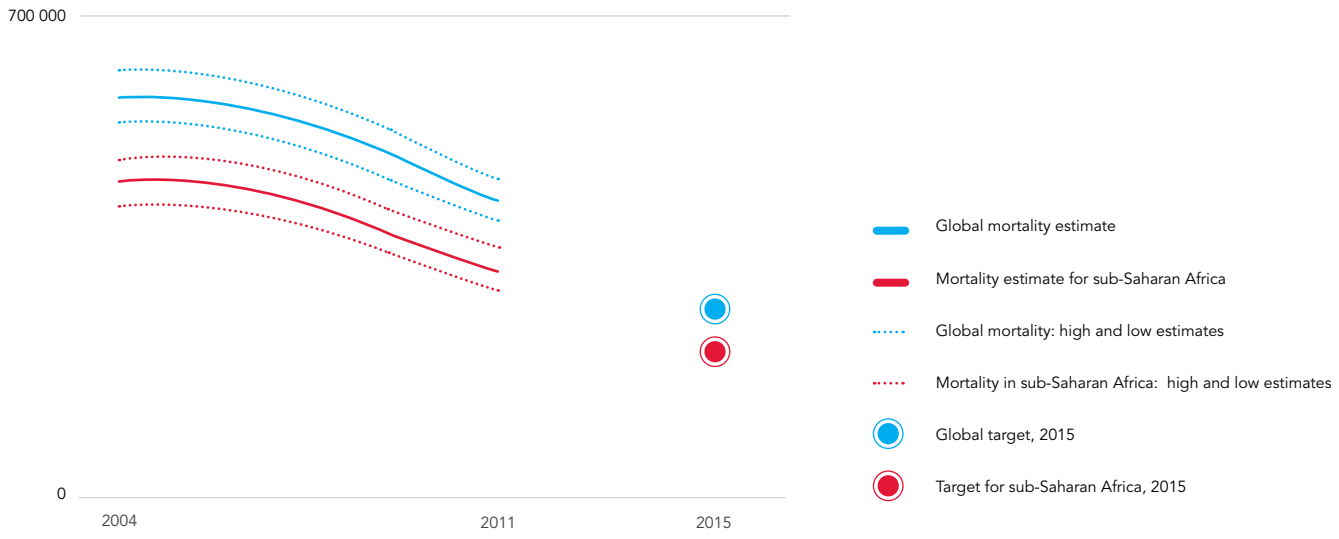
Major strides have been made towards the global goal of reducing the number of TB-related deaths among people living with HIV by 50% by 2015. Since 2004, TB-related deaths among people living with HIV have fallen by 25% worldwide (Fig. 5.1) and by 28% in sub-Saharan Africa, home to nearly 80% of all people living with both TB and HIV. WHO estimates that scaling up collaborative HIV and TB activities meant that an estimated 1.3 million people avoided dying from AIDS-related causes from 2005 to 2011.

In 2011, people living with HIV accounted for 1.1 million (13%) of the estimated 8.7 million people who developed TB worldwide and were living with HIV. Of the people with TB who received an HIV test result, 23% tested positive in 2011 (Table 5.1) *(1)*.

Several critical steps are needed to build on recent gains and reach the global target of halving TB-related deaths among people living with HIV.

Fig. 5.1

Estimated number of TB-related deaths among people living with HIV, 2004–2011



Source: *Global tuberculosis report 2012*. Geneva, World Health Organization, 2012 (www.who.int/tb/publications/global_report/en).

Antiretroviral therapy significantly reduces the risk of people acquiring and dying from TB by repairing their immune systems damaged by HIV infection. Early antiretroviral therapy therefore needs to continue being urgently scaled up to both prevent and treat TB among people living with HIV. According to a 2011 meta-analysis *(2)*, antiretroviral therapy reduces the risk of TB illness among people living with HIV by 65%. All people living with both HIV and TB should start antiretroviral therapy as soon as possible regardless of their CD4 count.

Table 5.1

HIV testing, treatment for people living with HIV and TB and preventing TB among people living with HIV, by region, 2011 (numbers in thousands except where indicated)

	Estimated number of people acquiring TB who are living with HIV (thousands)			Number of people with TB with known HIV status (thousands)	% of people with notified TB tested for HIV	% of tested people with TB who are living with HIV	% of people identified as living with HIV and TB starting antiretroviral therapy	Number of people living with HIV screened for TB
	Best estimate	Low estimate	High estimate					
Caribbean	6.2	5.4	7.2	14 248	71	20	31	2 341
East Asia	13	9.2	18	227 528	21	2.1	36	179 946
Eastern Europe and Central Asia	20	17	22.4	169 870	60	6.8	42	8 245
Latin America	29	26	32	101 272	50	17	70	312
Middle East and North Africa	7.3	6.4	8.3	26 636	19	4.8	57	974
North America	1	0.9	1.2	9 056	76	8.3	NA	NA
Oceania	2.2	1.4	3.2	6 432	33	8.7	67	2 182
South and South-East Asia	164	140	190	882 810	30	7.1	58	448 468
Sub-Saharan Africa	874	800	951	1 005 082	69	46	46	2 798 326
Western and Central Europe	2.7	2.4	2.9	25.436	30	3.5	81	928
TOTAL	1 100	1 000	1 200	2 468 370	40	23	48	3 441 722

NA: not available.

Source: *Global tuberculosis report 2012*. Geneva, World Health Organization, 2012 (www.who.int/tb/publications/global_report/en).

48%
TREATED FOR HIV

Fewer than half of all people living with tuberculosis and HIV received antiretroviral therapy in 2011.

Globally in 2011, fewer than half (48%) of the people with TB with a documented HIV-positive test result obtained antiretroviral therapy (Table 5.1). In sub-Saharan Africa, only 46% of the people living with both HIV and TB initiated HIV treatment. Of the 41 countries with a high burden of HIV infection and TB (accounting for 97% of the estimated global number of people living with HIV and TB *(3)*), the percentage of people with TB with a documented HIV-positive test result receiving antiretroviral therapy exceeds 75% in only 6: Angola, Brazil, Cambodia, Myanmar, Rwanda and Sudan (Table 5.2) *(1)*.

Since prompt diagnosis is required for effective treatment, and sometimes survival, the fact that more people with TB are being tested for HIV is promising. From 2010 to 2011, the proportion of people with TB receiving HIV testing rose from 33% to 40%, with 2.46 million people with TB being tested for HIV in 2011.

Testing rates in 2011 were higher (at 45%) in the 41 countries with a high burden of HIV infection and TB, which accounted for nearly 90% of all the people with TB receiving HIV testing and reached 69% in the African Region of WHO. Half of the 41 countries provided HIV testing among at least 75% of all people with TB in 2011, although testing lags in many countries. Although Myanmar reports high coverage of antiretroviral therapy among people living with HIV, its coverage is challenged by low HIV testing rates among people with TB (Table 5.2) *(1)*.

Among people living with HIV, 3.2 million were reported to have been screened for TB in 2011, and 460 000 people living with HIV without active TB received isoniazid preventive therapy. TB screening among people living with HIV rose almost two-fold in South Africa, and the number of people living with HIV receiving preventive TB therapy increased nearly three-fold, from 146 000 in 2010 to 373 000 in 2011 *(1)*.

Although recent gains are heartening, additional initiatives are needed to strengthen the response to the linked epidemics of HIV and TB. Testing everyone with TB for HIV provides the essential entry point to care for undiagnosed individuals living with HIV. Similarly, scaling up the three I's for HIV and TB (intensified TB case-finding; isoniazid preventive therapy and infection control for TB *(3)*) and initiating antiretroviral therapy early are crucial for HIV programmes in preventing and reducing the burden of TB among people living with HIV. Everyone enrolled in HIV care should be screened for TB, people living with HIV without active TB should receive isoniazid preventive therapy and antiretroviral therapy should be provided to everyone living with HIV and TB regardless of their CD4 count. All HIV care facilities should ensure that adequate TB infection control measures are in place to limit the transmission of TB and ensure a safer environment for service users and health care staff. Further efforts are also needed to strengthen case reporting and the tracking of progress of the collaborative HIV and TB activities by HIV stakeholders through harmonized indicators *(4,5)* and globally recommended patient monitoring systems *(6)*.

Table 5.2

People with TB initiating antiretroviral therapy and percentage of people with notified TB tested for HIV in the 41 countries with a high burden of HIV and TB with data available

PERCENTAGE OF PEOPLE IDENTIFIED AS LIVING WITH HIV AND TB WHO INITIATED ANTIRETROVIRAL THERAPY

<25%

Central African Republic
Democratic Republic of the Congo
Haiti

25–50%

Botswana
Burundi
China
Congo
Côte d'Ivoire
Ethiopia
Ghana
Indonesia
Lesotho
Mozambique
Nigeria
Sierra Leone
South Africa
Uganda
Ukraine
United Republic of Tanzania
Viet Nam

51–75%

India
Kenya
Malawi
Mali
Namibia
Swaziland
Thailand
Zambia
Zimbabwe

76–100%

Angola
Brazil
Cambodia
Myanmar
Rwanda
Sudan

PERCENTAGE OF PEOPLE WITH NOTIFIED TB WHO WERE ALSO TESTED FOR HIV

<25%

Angola
China
Congo
Indonesia
Myanmar
Sudan

25–50%

Central African Republic
Chad
Democratic Republic of the Congo
Djibouti
Ethiopia
India
Mali

51–75%

Brazil
Burundi
Haiti
Thailand
Ukraine
Viet Nam

76–100%

Botswana
Burkina Faso
Cambodia
Cameroon
Côte d'Ivoire
Ghana
Kenya
Lesotho
Malawi
Mozambique
Namibia
Nigeria
Russian Federation
Rwanda
Sierra Leone
South Africa
Swaziland
Togo
Uganda
United Republic of Tanzania
Zambia
Zimbabwe

Source: 2012 country progress reports (www.unaids.org/cpr).

6 RESOURCES AND SPENDING

Encouraging signs emerged in 2011 in the quest to close the global AIDS resource gap, as HIV spending increased by 11% compared with 2010. Especially noteworthy was a 15% rise in HIV expenditure by low- and middle-income countries, with domestic spending accounting for a majority of all HIV expenditure for the first time. However, total global HIV investment in 2011 was US$ 16.8 billion, compared to the global goal of US$ 22 billion to US$ 24 billion in annual HIV spending in 2015.

TRACKING SPENDING ON HIV

In 2012, 127 countries (including 112 low- and middle-income countries) reported on HIV spending (Table 6.1). East Asia, Central and South America and Eastern Europe and Central Asia had the highest reporting rates, with more than 80% of countries providing data on spending.

The comprehensiveness of national funding reports varies. Of the 127 countries, 11 countries only reported their total HIV spending, failing to differentiate spending by category. Eighty-one low- and middle-income countries reported spending on antiretroviral therapy in 2012 (similar to reporting in 2010), while 79 reported expenditure data on services to eliminate new infections among children (an increase of 6%).

RESOURCES AVAILABLE FOR HIV PROGRAMMES IN LOW- AND MIDDLE-INCOME COUNTRIES

Low- and middle-income countries are driving the global increase in HIV spending. Although international funding has stagnated with the onset of the global economic downturn, domestic spending has been continually increasing. Domestic public and private HIV spending in low- and middle-income countries rose from US$ 3.9 billion in 2005 to almost US$ 8.6 billion in 2011 (Fig. 6.1). This increase in domestic outlays has not only provided essential new funding for HIV programmes but also clearly indicates the growth in country ownership of national AIDS responses.

Table 6.1

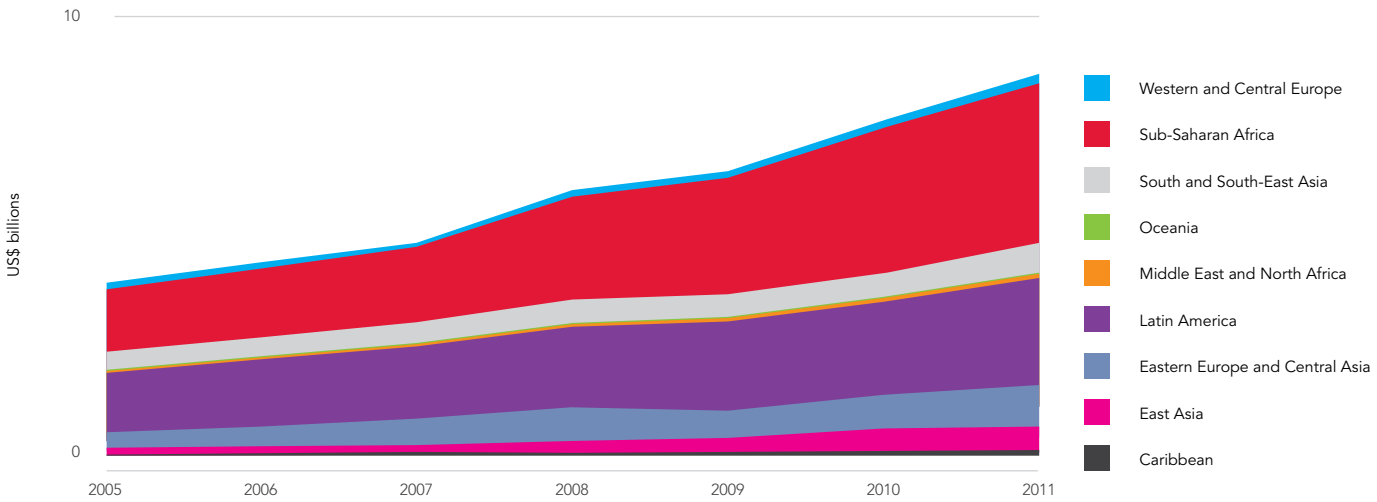
Reporting AIDS spending in 2012

	Number of countries	Reporting	Not reporting	Response rate
Eastern Europe and Central Asia	12	10	2	83%
Central and South America	19	17	2	89%
South and South-East Asia	19	15	4	79%
Sub-Saharan Africa	46	35	11	76%
Caribbean	13	9	4	69%
Oceania	14	11	3	79%
Middle East and North Africa	20	14	6	70%
East Asia	5	5	0	100%
Western and Central Europe	42	11	31	26%
North America	2	0	2	0%
TOTAL	192	127	65	66%

Source: 2012 country progress reports (www.unaids.org/cpr).

Fig. 6.1

Domestic public and private resources available for HIV in low- and middle-income countries in current billions of US dollars, 2005–2011



Source: UNAIDS estimates.

WHO PAYS FOR THE AIDS RESPONSE?

Although domestic spending is growing in importance, donor contributions continue to play a critical role in funding the AIDS response, especially in low- and middle-income countries (Fig. 6.2).

Increasingly, many middle-income countries have assumed a greater role in funding their own national responses. South Africa, for example, increased domestic HIV spending five-fold from 2006 to 2009, while domestic HIV spending by Botswana more than doubled from 2006 to 2011. However, many upper-middle-income countries are still not fully assuming the responsibility of funding their AIDS response, with half of upper-middle-income countries allowing external donors to fund 50% or more of their HIV programmes for key populations at higher risk.

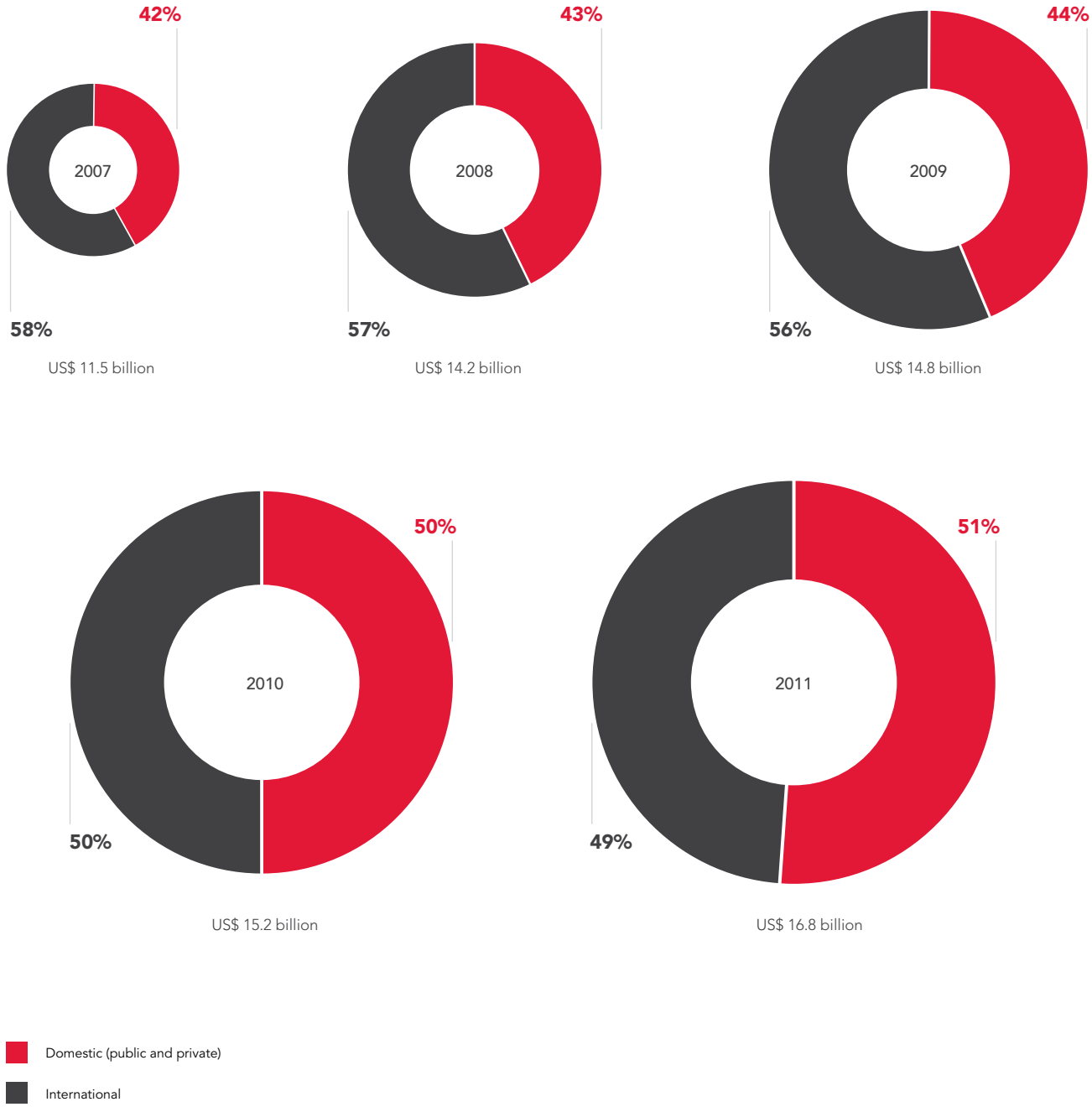
Zambia's domestic health budget for 2012 is 45% larger than in 2011, although total health expenditure remains short of the 15% share of the national budget for health agreed to in the Abuja Declaration *(1)*.

Some low-income countries have also taken important steps to increase domestic HIV investment: Kenya doubled its domestic HIV spending from 2008 to 2010, Togo doubled its domestic spending from 2007 to 2010 and Rwanda doubled its domestic HIV spending from 2006 to 2009.

Although domestic investment for HIV programmes has increased, many countries still rely heavily on international assistance. Overall, international sources provided 36% of the US$ 9.4 billion spent on HIV in the 107 low- and middle-income countries that reported on this in 2006-2011. Among these countries, 82 received more than 25% of their total spending from international sources, including 61 countries that received more than half their HIV funding from abroad and 38 countries that relied on international sources for 75% or more. Among 33 Sub-Saharan African countries with available data on international funding in the period 2009 to 2011, 26 received more than half of their HIV funding from international resources, including 19 countries that relied on external sources for 75% or more (Table 6.2).

Fig. 6.2

Resources available for HIV in low- and middle-income countries in billions of US dollars, 2007–2011



Source: UNAIDS estimates.

Table 6.2

Percentage of HIV funding coming from international sources, in low- and middle-income countries reporting, most recent year[a]

≥ 75%

Afghanistan 2011
Bangladesh 2011
Bolivia (Plurinational State of) 2011
Burkina Faso 2010
Burundi 2010
Cambodia 2009
Cape Verde 2011
Central African Republic 2011
Côte d'Ivoire 2009
Democratic Republic of the Congo 2010
Djibouti 2011
Fiji 2011
Ghana 2010
Guinea 2011
Guinea-Bissau 2010
Haiti 2011
Kenya 2010
Kiribati 2011
Lao People's Democratic Republic 2011
Liberia 2011
Malawi 2011
Mali 2010
Micronesia (Federated States of) 2011
Myanmar 2011
Nepal 2009
Niger 2011
Papua New Guinea 2010
Rwanda 2009
Sao Tome and Príncipe 2011
Sierra Leone 2009
Solomon Islands 2011
Sudan 2009
Tajikistan 2011
Tunisia 2011
Tuvalu 2011
Vanuatu 2011
Viet Nam 2010
Zimbabwe 2011

50–74%

Armenia 2011
Belarus 2011
Belize 2010
Benin 2010
Cameroon 2010
Chad 2011
Congo 2010
Georgia 2011
Indonesia 2010
Jamaica 2010
Kyrgyzstan 2011
Madagascar 2011
Mongolia 2011
Nicaragua 2010
Nigeria 2010
Pakistan 2010
Palau 2011
Republic of Moldova 2011
Saint Vincent and the Grenadines 2011
Suriname 2011
Swaziland 2009
Togo 2010
Yemen 2011

25–49%

Angola 2011
Antigua and Barbuda 2011
Azerbaijan 2011
Bulgaria 2011
Gabon 2011
Grenada 2011
Guatemala 2010
Honduras 2010
Jordan 2011
Lebanon 2011
Marshall Islands 2011
Mauritius 2010
Morocco 2011
Namibia 2010
Peru 2010
Philippines 2011
Samoa 2011
Sri Lanka 2010
The former Yugoslav Republic of Macedonia 2010
Ukraine 2010
Uzbekistan 2011

<25%

Algeria 2011
Argentina 2009
Botswana 2011
Brazil 2010
Chile 2010
China 2011
Colombia 2011
Costa Rica 2010
Cuba 2011
Democratic People's Republic of Korea 2011
Ecuador 2010
El Salvador 2010
Iran (Islamic Republic of) 2009
Kazakhstan 2011
Latvia 2011
Lithuania 2011
Malaysia 2011
Mexico 2009
Panama 2010
Romania 2011
Seychelles 2011
South Africa 2009
Syrian Arab Republic 2011
Thailand 2011
Venezuela (Bolivarian Republic of) 2011

[a] This table lists only countries that reported international contributions for 2009–2011. These figures exclude private funding for HIV, for which data is only available in a handful of countries.

Source: 2012 country progress reports (www.unaids.org/cpr).

Although the increase in domestic spending has helped to narrow the AIDS resource gap, robust and reliable donor support will remain crucial in achieving global AIDS goals. This is especially true for the low-income countries, which will likely remain dependent on donors in the near term. International funding is critical for low-income countries with a high prevalence of HIV infection, since such countries would have limited capacity to fully close gaps created by any future cutbacks in international support. Low-income countries with a high prevalence of HIV infection include Central African Republic, Kenya, Malawi, Mozambique, Uganda and Zimbabwe.

MAXIMIZING THE STRATEGIC USE OF FINITE RESOURCES

The investment approach[1] aims to promote the most strategic use of limited AIDS resources by allocating spending among six basic programmatic activities,[2] critical enablers for successful responses and initiatives that promote synergy with broader development sectors. The spending data of 100 countries reporting detailed spending on activities defined as people-centred basic programme activities show a need for more effort in funding services to eliminate new infections among children and prevention programmes for key populations at higher risk to reach more efficient investment on HIV by 2015 (Fig. 6.3). Investment clearly needs to be increased in all areas by 2015, with prevention programmes being particularly underfunded. The proportional spending needs to increase 2.9-fold for programmes for preventing children from acquiring HIV infection, 3-fold for voluntary medical male circumcision programmes and 4-fold for programmes for key populations at higher risk.

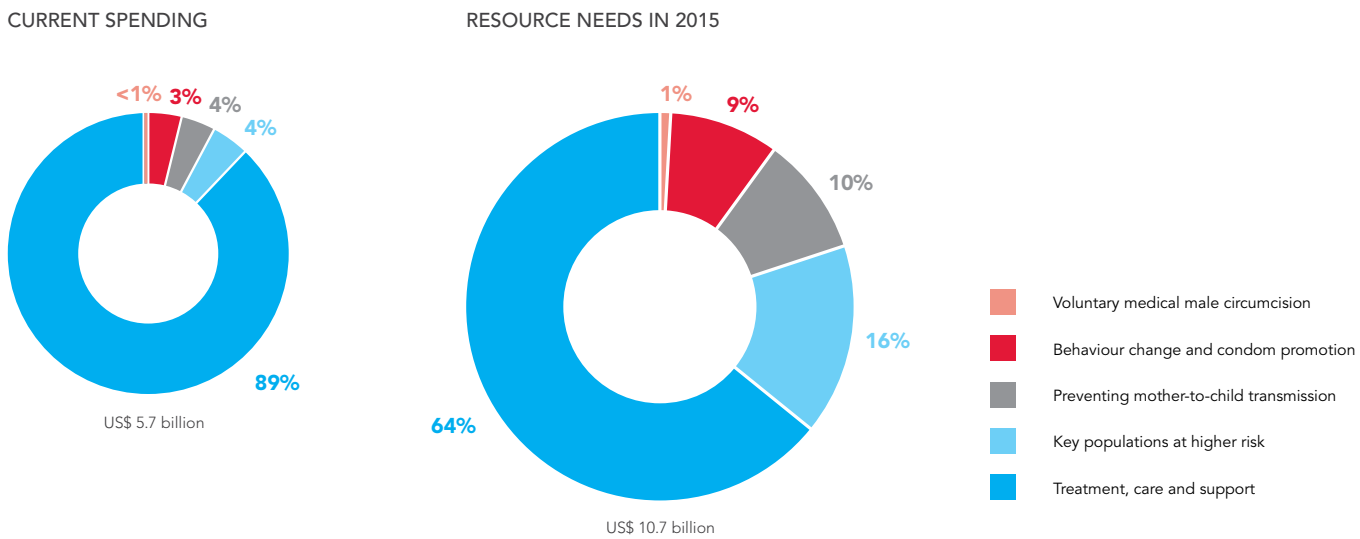
In 2012, UNAIDS is working with at least 49 countries to assess national spending priorities, with the aim of implementing more effective and efficient HIV programmes.

An important strategy for enhancing value for money is to maximize impact and cost-efficiency by focusing limited resources where the epidemic is most severe and on the populations in greatest need. The spending pattern differs between regions and countries according to their type of epidemic. In some settings, investing more strategically requires focusing a larger share of prevention spending on the general population.

[1] In 2012, UNAIDS set forth a new Investment Tool for a more strategic and effective AIDS response. Countries are advised to tailor this approach to national conditions *(2)*.
[2] Under the Investment Tool, basic programmatic activities include programmes for key populations at higher risk; eliminating new infections among children; behaviour change programmes; promoting and distributing condoms; treatment, care and support for people living with HIV; and voluntary medical male circumcision in countries with a high prevalence of HIV infection and low rates of circumcision.

Fig. 6.3

Proportional spending on people-centered basic programme activities in 100 low- and middle-income countries: current versus 2015 projection according to the Investment Tool

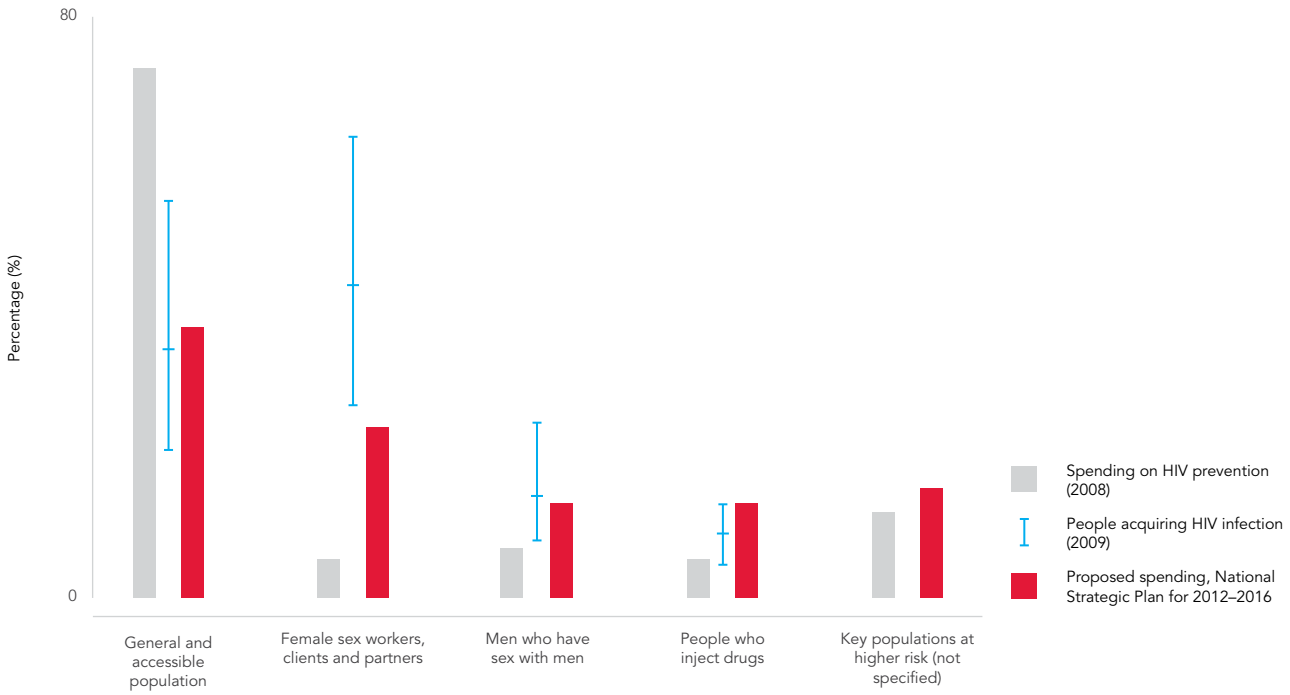


Sources: 2012 country progress reports (www.unaids.org/cpr) and Schwartländer B et al. Towards an improved investment approach for an effective response to HIV/AIDS. *Lancet*, 2011, 377:2031–2041.

In other countries, the focus needs to be on the key populations that represent the largest share of the people newly infected. Morocco has used strategic information to optimize the allocation of resources. The distribution of the people newly infected with HIV according to the mode of transmission was compared with recent spending patterns to focus future prevention planning (Fig. 6.4). The modes of transmission analysis indicated that the main factors in the HIV epidemic in Morocco are unprotected paid sex, sex between men and the sharing of contaminated drug-injecting equipment. The comparison to spending patterns showed that HIV prevention spending in 2008 did not match the distribution of people newly infected with HIV in Morocco. As a result, projected resource needs for future prevention interventions were revised. The 2012–2016 National Strategic Plan for Morocco now proposes to allocate 63% of AIDS resources towards prevention among key populations at higher risk, up from about 25% according to the 2008 spending assessment.

Fig. 6.4

Reallocation of resources to programmes for key populations at higher risk of HIV infection in Morocco



Source: *HIV modes of transmission in Morocco*. Rabat, Morocco Ministry of Health, National STI/HIV Programme, 2010.

CLOSING THE RESOURCE GAP: MOVING FORWARD TO 2015

Multiple avenues will need to be pursued if the world is to reach the target of mobilizing US$ 22 billion to US$ 24 billion annually for the AIDS response. Countries should ensure that HIV spending is focused on effective investment and should take steps to further increase their domestic spending, including developing innovative and sustainable AIDS funding sources. Efforts must be intensified to improve the efficiency of AIDS spending through such means as capturing productivity gains, further reducing the costs of antiretroviral medicines, integrating services and improving service delivery. Economic growth in low- and middle-income countries can help expand the fiscal space for HIV investment, and further efforts are needed to cultivate emerging economies as international AIDS donors. In the context of shared responsibility and global solidarity, current international donors must also remain engaged in closing the resource gap for countries in need. Only by applying the investment approach and working within a framework of shared responsibility will countries reach their 2015 goal.

7 GENDER AND THE HIV RESPONSE

In the 2011 Political Declaration on HIV and AIDS, countries pledged to eliminate gender inequalities and gender-based abuse and violence and to increase the capacity of women and girls to protect themselves from HIV. Efforts to accelerate progress towards this goal continue to be undermined by inadequate resources for initiatives to address the epidemic's gender dimensions as well as the persistence of gender-based violence. However, experiences from diverse settings provide inspiration and guidance, demonstrating the feasibility of the aspiration to end gender inequalities, combat gender-based violence and link women and girls to the services they need.

GENDER INEQUALITY DRIVES THE HIV EPIDEMIC

HIV continues to profoundly affect women and girls across all regions. For example, in sub-Saharan Africa, the region most severely affected by HIV, women represent 58% of the people living with HIV and bear the greatest burden of care.

The lower socioeconomic and political status women are assigned, including unequal access to education and employment, and fear or experience of violence compound women's greater physiological vulnerability to HIV. Because of social and economic power imbalances between men and women and the associated limitations in access to services, many women and girls have little capacity to negotiate sex, insist on condom use or otherwise take steps to protect themselves from HIV.

Gender norms also increase men's vulnerability to HIV, encouraging high-risk behaviour and deterring them from seeking sexual health services or acknowledging their lack of knowledge about HIV *(1)*. In addition, stigma and discrimination against transgender people render them highly vulnerable to HIV and impede their access to HIV service and secure livelihoods.

ENSURING EQUITABLE ACCESS TO SERVICES

Although the growing availability of HIV testing and prevention services in antenatal settings offers women an entry point to HIV services, overall access to HIV services remains insufficient for pregnant women living with HIV and their male partners. Whereas 57% of pregnant women living with HIV in low- and

middle-income countries received antiretroviral prophylaxis in 2011, only 30% of pregnant women who need antiretroviral therapy for their own health obtain this life-saving treatment.

UNAIDS-led participatory assessments *(2)* of gender-related barriers to services to prevent infants from becoming newly infected with HIV underscore the negative effect of gender inequality. Female study participants cited their lack of decision-making power, lack of access to resources, fear of violence and abandonment and cultural attitudes towards sex, pregnancy and HIV as significant barriers to services.

Outside the realm of motherhood, women and girls face similar barriers to HIV prevention and testing services. Throughout their life cycle, women face harmful gender norms that increase their vulnerability to HIV; indeed, they are often blamed for contracting HIV and face stigma and discrimination because of perceived immorality *(3)*.

Similarly, gender norms of masculinity discourage men from seeking help and admitting ill health *(4)*. Men have consistently lower rates of HIV testing than do women, lower CD4 counts when accessing treatment and poorer adherence. As a result, men have higher mortality rates *(5)*. Men's disproportionately poorer access to antiretroviral therapy has been documented across southern Africa *(6)* and in numerous countries, including Kenya *(7)*, Malawi *(8)*, South Africa *(9)* and Zambia *(10)*.

ADDRESSING GENDER INEQUALITY THROUGH HIV POLICIES

Nearly all countries now include women-focused initiatives in their national AIDS strategies (Fig. 7.1). However, country reports show varied understanding of what it means to "include women" in national AIDS responses, suggesting that current approaches may be only partial, inadequately rights-based and inadequately focused on the meaningful involvement of women and girls. Many fewer countries actually budget for specific HIV-related activities for women and girls than the number that target women in their national strategies.

In 2011 (Fig. 7.2), only one third of countries had brought female condom programming to scale nationally, and a similar proportion were integrating HIV and sexual and reproductive health services. Only about 1 in 10 countries effectively engage men and boys in the AIDS response at the national level. Even though the Convention on the Elimination of All Forms of Discrimination against Women is the key global accountability mechanism for women's rights, few countries involve women living with HIV in national reporting.

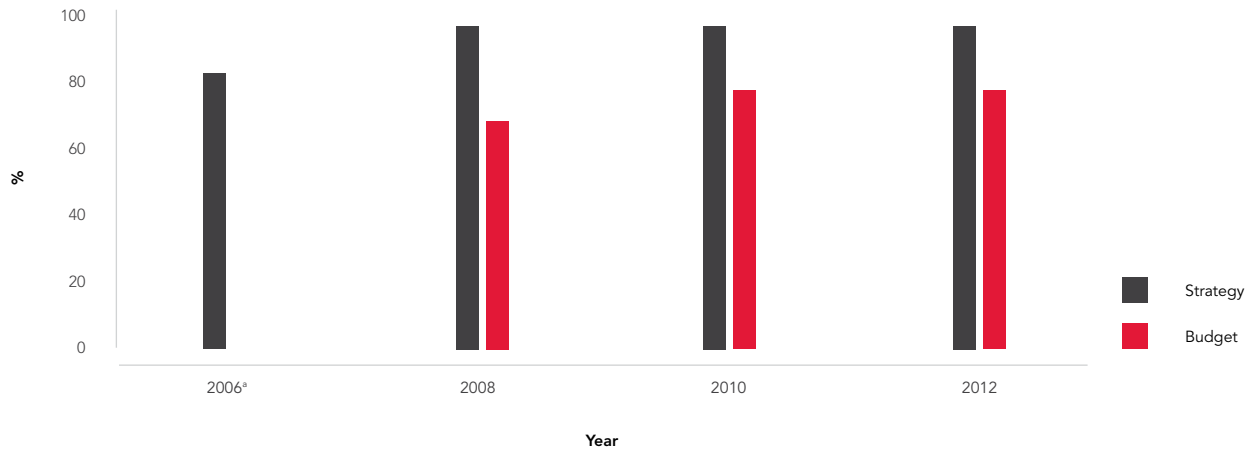
10%

MEN AND BOYS

Only 10% of countries are effectively engaging men and boys in their national AIDS response.

Fig. 7.1

Percentage of UNAIDS priority countries reporting that they include and budget for women in their HIV-related multisectoral strategies, 2006–2012

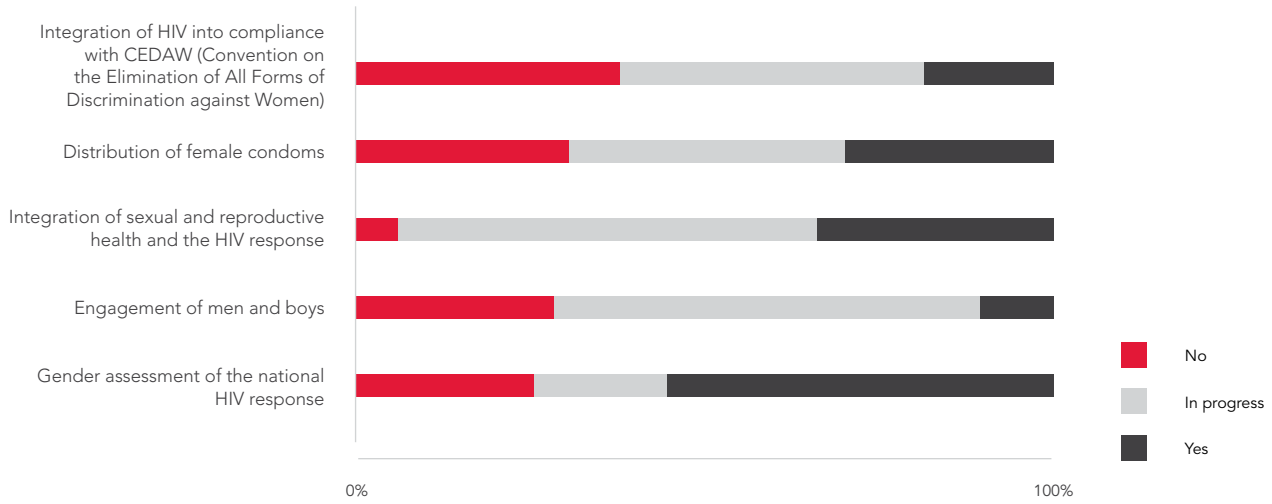


[a] No budget data are available for 2006.

Sources: data from the NCPI 2006–2012 (www.unaids.org/ncpi) for 21 countries reporting consistently in all four reporting rounds in 2006–2012.

Fig. 7.2

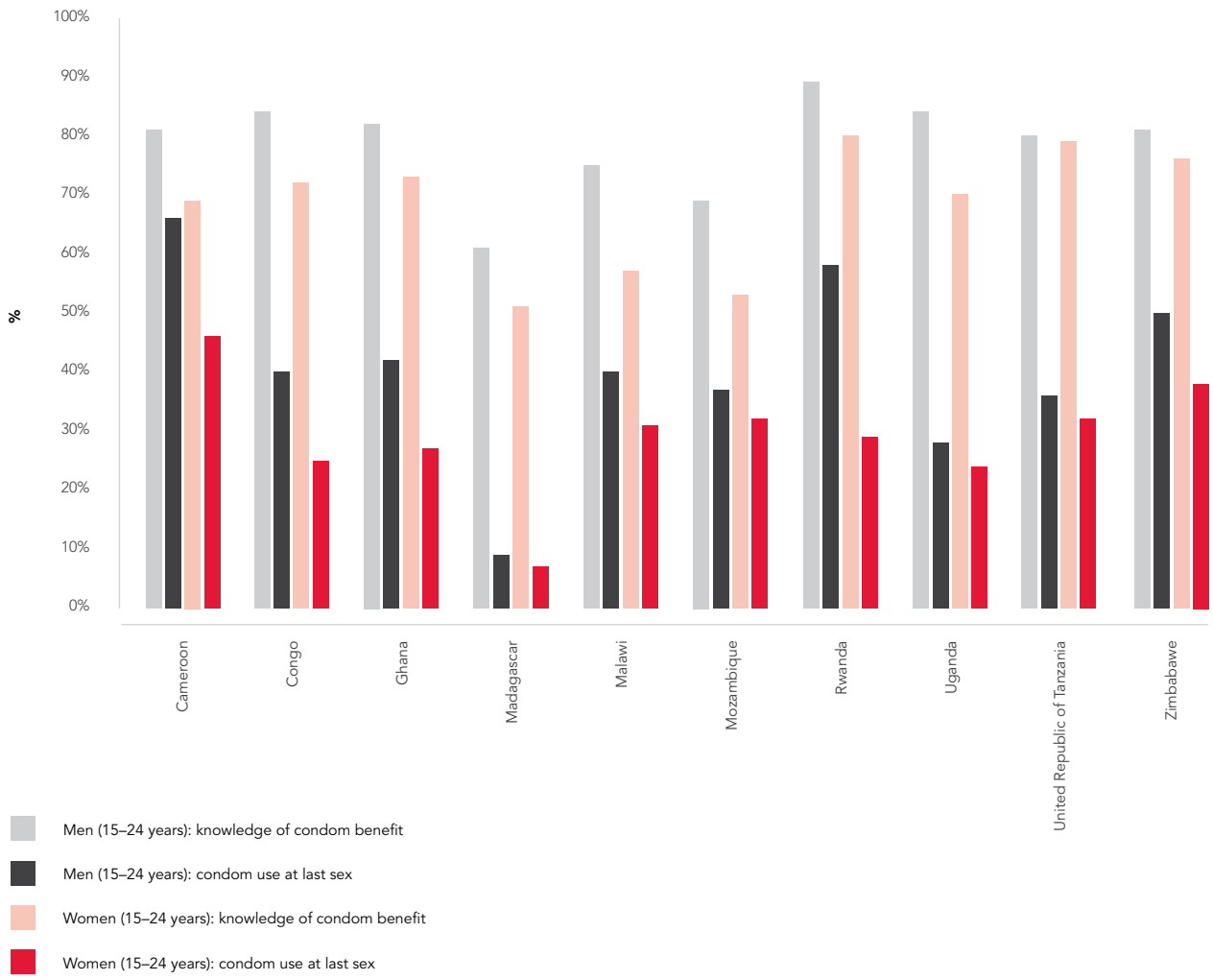
Selected markers from the UNAIDS gender scorecard responses in 2011: percentage of 94 countries at various levels of progress



Source: *Scorecard on gender equality in national HIV responses: documenting country achievement and the engagement of partners under the UNAIDS Agenda for Women, Girls, Gender Equality and HIV*. Geneva, UNAIDS, 2011.

Fig. 7.3

Knowledge about condoms and reported condom use at last sex among young men and women with more than one sexual partner in the past 12 months – selected countries in sub-Saharan Africa, latest available data



Source: Demographic and Health Surveys (www.measuredhs.com).

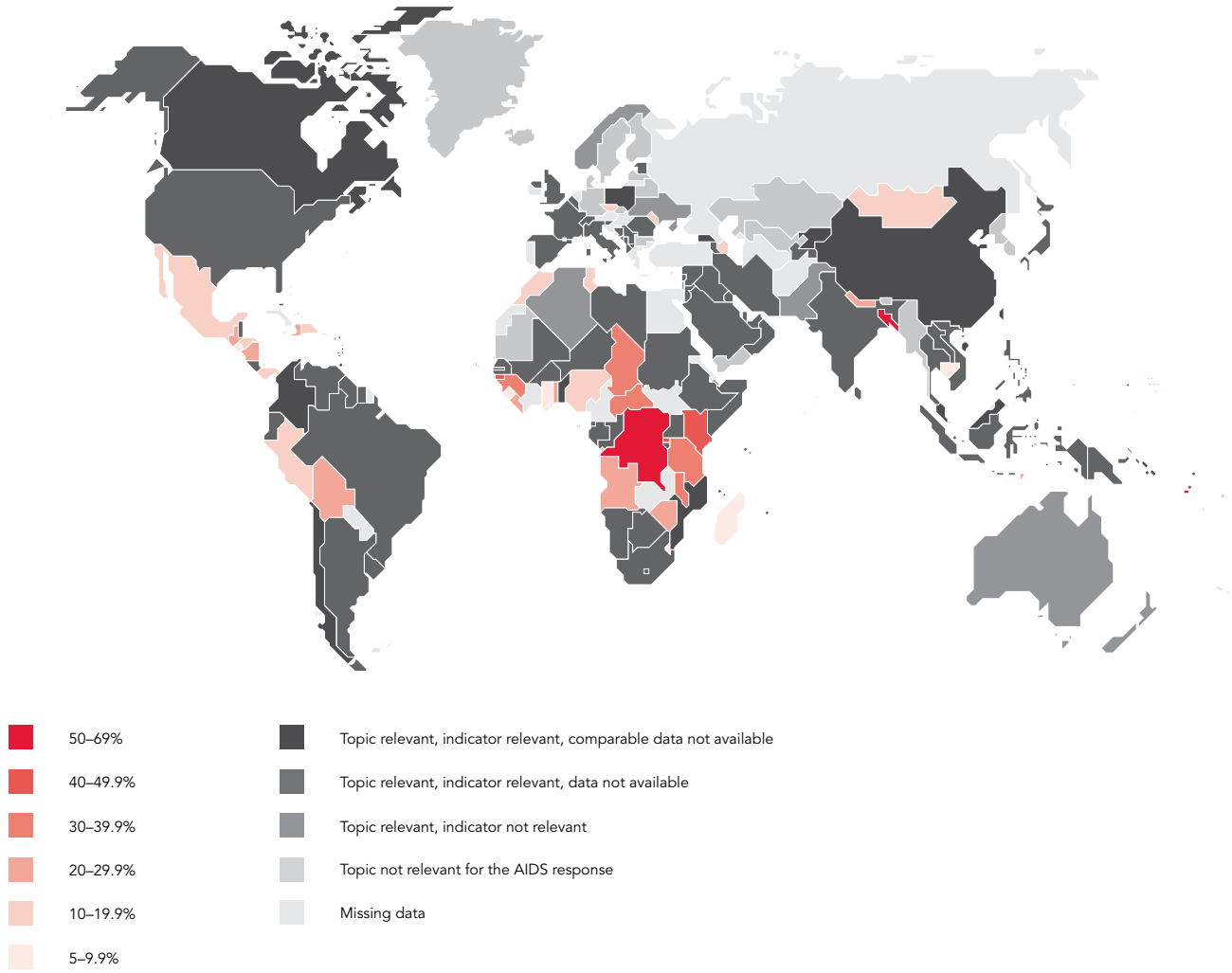
The failure to implement appropriate policies to address the needs and rights of women and girls undermines efforts to curb the spread of HIV. For example, in many countries, young women are consistently less likely than young men to know about the protective benefits of condoms or to report condom use during sexual intercourse (Fig. 7.3).

Sexual, physical and emotional abuse of women is among the most brutal manifestations of gender inequality. Gender-based violence is a global phenomenon, with reported national prevalence of intimate-partner violence in the past 12 months ranging from 5% to 69% among women in diverse countries studied (Fig. 7.4). In Swaziland *(11)* and the United Republic of Tanzania *(12)*, nearly 1 in 3 girls and women aged 13–24 years reported experiencing at least one incident of sexual violence before age 18.

In addition to violating women's human rights, gender-based violence is both a cause and effect of HIV transmission. Fear of violence undermines the capacity of women and girls to negotiate safer sex, and the experience of violence is associated with

Fig. 7.4

Prevalence of intimate-partner violence in the past 12 months for countries with reported data and for countries without data if they reported the indicator as being relevant or not

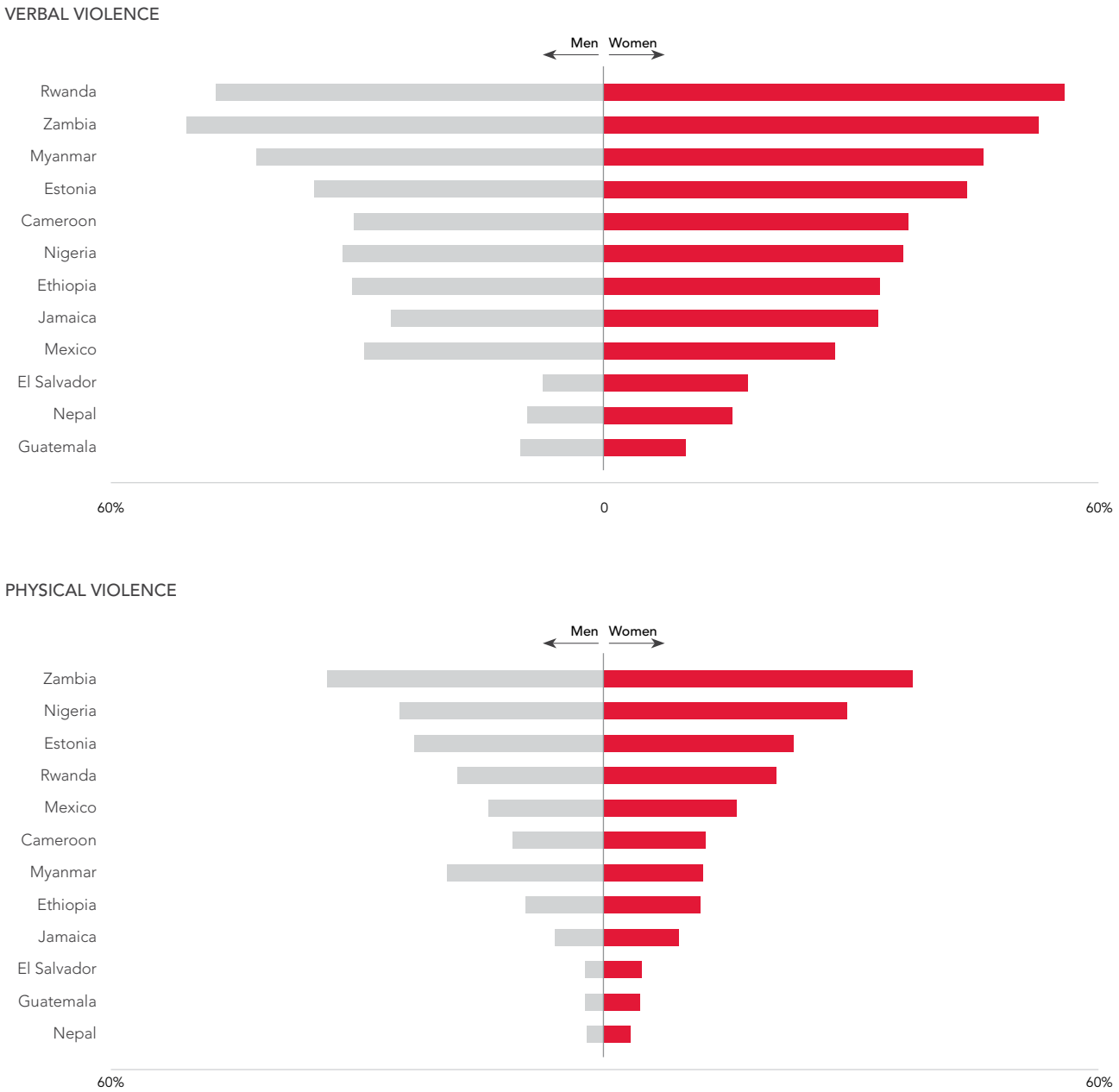


Source: 2012 country progress reports (www.unaids.org/cpr).

increased sexual risk behaviour in later years *(13)*. According to surveys through the People Living with HIV Stigma Index, women living with HIV are more frequent targets of verbal abuse and physical violence than men living with HIV and also report higher levels of shame and suicidal thoughts (Fig. 7.5).

Fig. 7.5

Percentage of men and women living with HIV experiencing verbal and physical violence, countries with available sex-disaggregated data



Sources: surveys conducted using the People Living with HIV Stigma Index to be published at www.stigmaindex.org.

ADDRESSING THE HIV-RELATED NEEDS OF TRANSGENDER PEOPLE

43%
TRANSGENDER POLICIES

Only 43% of countries report that their national AIDS strategies address transgender people.

The estimated 15 million transgender people around the globe *(14)* have a disproportionate risk of acquiring HIV infection, with HIV prevalence as high as 68% *(14,15)* and considerable vulnerability to gender-based violence. Transgender people confront high rates of stigma and discrimination by engaging in a gender expression that differs from their birth-assigned sex. Their vulnerability is further exacerbated by inadequate access to information, services and economic opportunities. As a result, transgender people often rely on sex work as their only source of income and survival, with involvement in sex work by up to 44% of transgender people *(16,17)*.

Although recognition is growing of the epidemic's severity among transgender people and organization is increasing within transgender communities to advocate for their rights, transgender people remain severely underserved in the AIDS response. Prevention programmes rarely address the specific vulnerability of transgender people. As a result, transgender people remain largely invisible in the AIDS response: in 2012, only 43% of countries reported that their national AIDS strategies address transgender people. Forty per cent of countries report that government provides less than 25% of their transgender programmes and services *(18,19)*.

BUILDING ON PROVEN SUCCESSES: THE WAY FORWARD

Although the barriers posed by gender inequalities are severe and often daunting, these socially constructed impediments can be influenced by well-designed initiatives that aim to alter harmful gender norms. For example, in Malawi, where the HIV prevalence among women 15–24 years old is more than twice that of their male peers, the Coalition of Women Living with HIV/AIDS has used an evidence-informed approach to challenge prevailing gender norms through effective communication. Participants' condom uptake had increased, gender-based violence declined and the number of men having multiple, concurrent partnerships had fallen. Broader community engagement also helped to alleviate HIV-related stigma and discrimination, as reflected in an increase in the number of people publicly disclosing their HIV status and a growth in support group participation *(20)*.

Building on such successes, countries should empower women and girls in all their diversity, including women living with HIV, as leaders to catalyse essential cultural shifts towards gender equality and access to quality services. Adequate funding to address the epidemic's gender dimensions is an essential element of the response. Countries should engage men and boys to promote healthy gender norms and adapt

HIV programmes to ensure that they reach all those in need, including marginalized groups such as transgender people. Efforts to combat gender-based violence, which enhance women's access to integrated HIV and sexual and reproductive health services, should be strengthened. In addition, the economic empowerment of women, including steps to ensure women's full enjoyment of property and inheritance rights and pursuing other promising strategies such as conditional cash transfers to encourage school attendance and access to school-based information and support, are also critical elements of an effective HIV response and broader sustainable development as a whole.

8 STIGMA, DISCRIMINATION AND THE LAW

Although much has been accomplished in addressing stigma, discrimination and punitive approaches since HIV infection first emerged, much work still remains to achieve the vision of zero discrimination by 2015. Eliminating stigma and discrimination will require laws and policies that ensure the full realization of all human rights in the context of HIV as well as programmatic responses that empower people living with HIV and help forge social norms of tolerance, solidarity and non-discrimination.

Fear, ignorance and discrimination regarding HIV continue to exact profound human costs, including in the worst forms – abusive treatment and violence. Negative attitudes and beliefs within communities can also increase internalized self-stigma, including guilt, shame and alienation felt by people living with HIV. According to data collected through the People Living with HIV Stigma Index,[1] more than half (52%) of people living with HIV in Zambia report having been verbally abused as a result of their HIV status (Table 8.1), and 1 in 5 people living with HIV in Nigeria and Ethiopia reported feeling suicidal.

The persistence of stigma and discrimination also undermines efforts to deliver essential HIV prevention and treatment services. In Nigeria, more than 1 in 5 (21%) people living with HIV say they have been denied health services as a result of their HIV infection. According to a nine-country study by the International Labour Organization and the Global Network of People Living with HIV, the percentage of people living with HIV who reported discriminatory attitudes among employers and co-workers ranged from 8% in Estonia to 54% in Malaysia *(1)*.

Highly marginalized and/or criminalized populations, including men who have sex with men, transgender people, people who use drugs and sex workers, face even higher levels of stigma and discrimination, including those relating to HIV (Fig. 8.1). In July 2012, the UNDP-led Global Commission on HIV and the Law, an independent body comprising health, social, legal and political leaders from around the world, detailed the close link between criminalized status, high levels of stigma (due to HIV and other status) and the inability to access and remain engaged in HIV services *(2)*.

[1] The People Living with HIV Stigma Index is a qualitative research tool developed by and for people living with HIV. More than 40 countries have already reported data under the index, with surveys undertaken from 2008 to 2011. See www.stigmaindex.org. Sampling methods differ between countries, and caution should be taken in comparing results from different countries.

Table 8.1

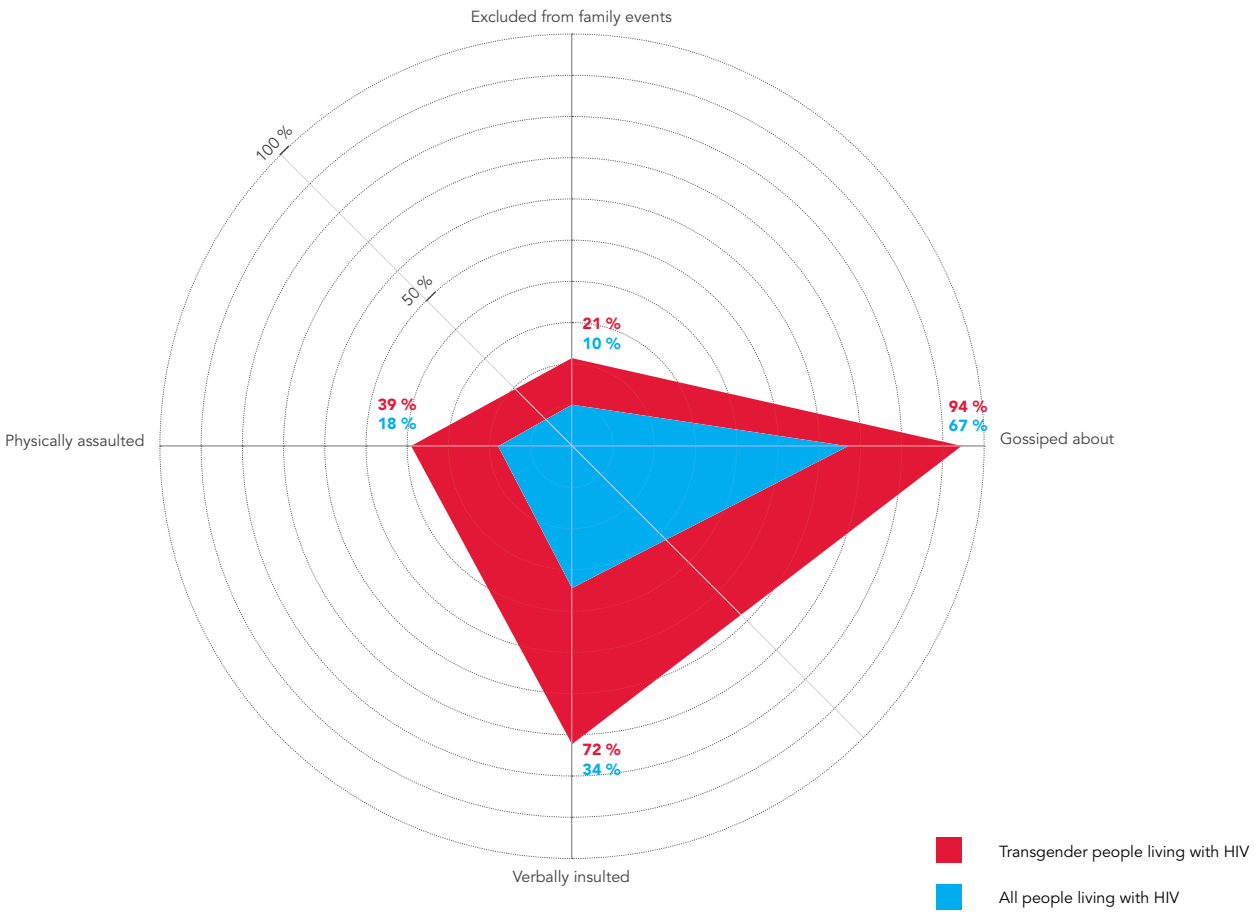
Results of surveys using the People Living with HIV Stigma Index, selected countries, 2008–2011

	Experiencing stigma in family and community (%)		Experiencing violence (%)		Stigma and discrimination in the workplace (%)		Internalized stigma (%)		Access to health care (%)	
	Excluded from family events	Gossiped about	Verbally insulted	Physically assaulted	Employment opportunity refused	Loss of job or income	Feel ashamed	Feel suicidal	Denied health services including dental care	Denied sexual and reproductive health services
Argentina	12	57	34	18	13	21	28	14	16	5
Cameroon	13	51	35	12	7	23	35	5	13	5
El Salvador	10	48	31	7	8	19	…	17	8	4
Estonia	7	63	39	24	…	29	42	10	8	2
Ethiopia	26	69	32	11	24	42	46	20	7	6
Guatemala	4	19	10	3	3	18	42	14	6	6
Jamaica	10	55	30	8	…	17	…	…	6	…
Kenya	30	79	56	31	…	41	42	16	…	…
Mexico	10	67	34	18	5	23	36	18	14	2
Myanmar	15	45	18	10	15	…	81	25	10	20
Nepal	6	36	12	3	8	12	49	15	7	2
Nigeria	34	54	35	28	…	29	63	20	21	8
Rwanda	22	42	53	20	37	65	22	14	8	13
Ukraine	7	59	42	15	….	…	37	8	…	8
Zambia	28	75	52	24	…	37	37	14	8	10

Sources: surveys conducted using the People Living with HIV Stigma Index to be published at www.stigmaindex.org.

Fig. 8.1

Level of stigma and discrimination experienced by transgender people living with HIV in Mexico



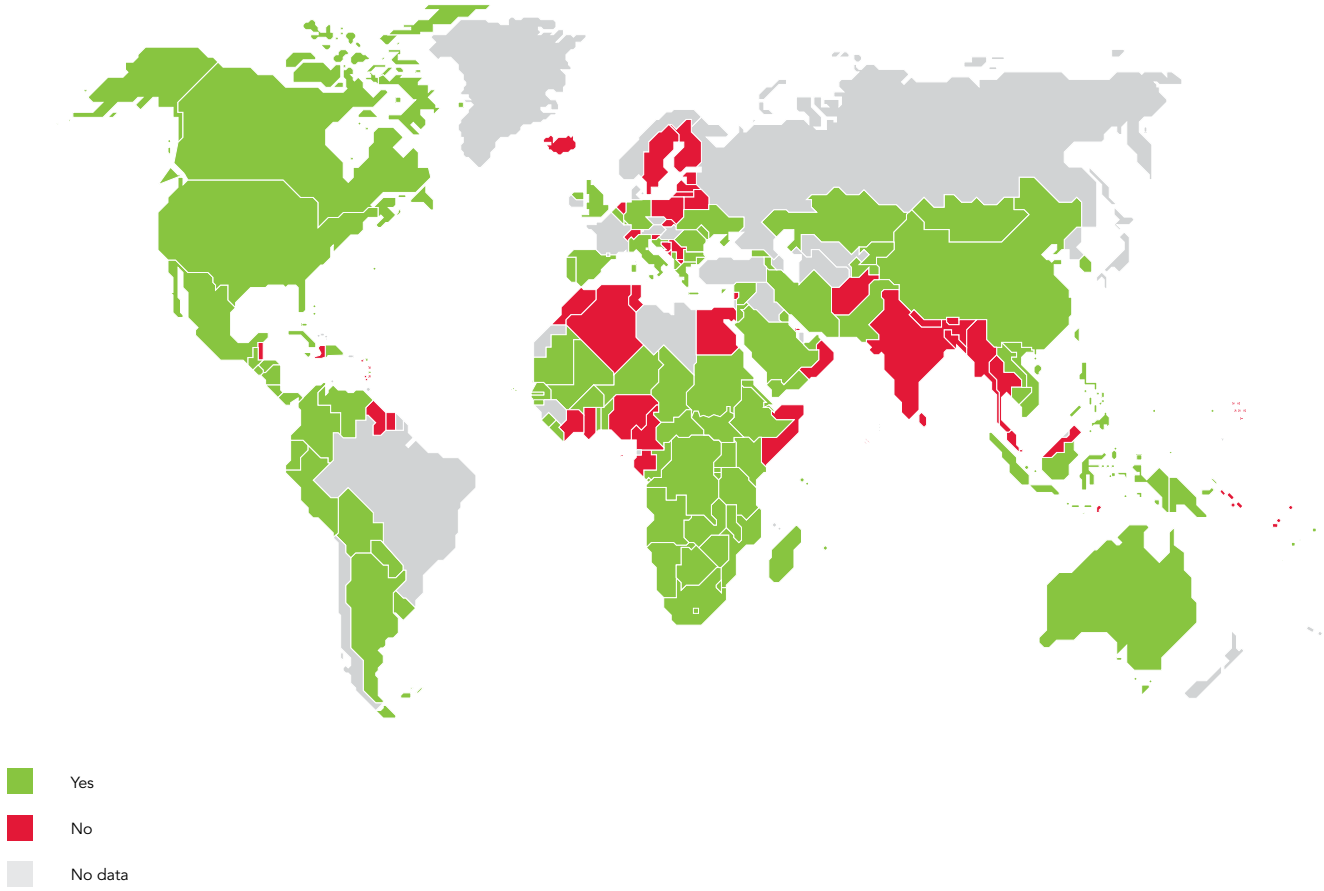
Source: data collected using the People Living with HIV Stigma Index in Mexico in 2011.

LAWS CAN PROTECT PEOPLE LIVING WITH HIV

In 2012, 61% of countries reported the existence of anti-discrimination laws that protect people living with HIV (Fig. 8.2) *(3)*. Thus, in the epidemic's fourth decade, nearly 4 in 10 countries worldwide still lack any specific legal provisions to prevent or address HIV-related discrimination.

Fig. 8.2

Countries reporting non-discrimination laws or regulations that specify protections for people living with HIV, 2012, nongovernmental sources



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

Even when such laws exist, they often provide little meaningful protection. For example, although an HIV anti-discrimination law is in place in Ukraine, no regulations have been approved to implement the law and subject violators to penalties. According to surveys in more than 40 countries through the People Living with HIV Stigma Index, few people who have experienced HIV-related discrimination know where or how to seek legal redress.

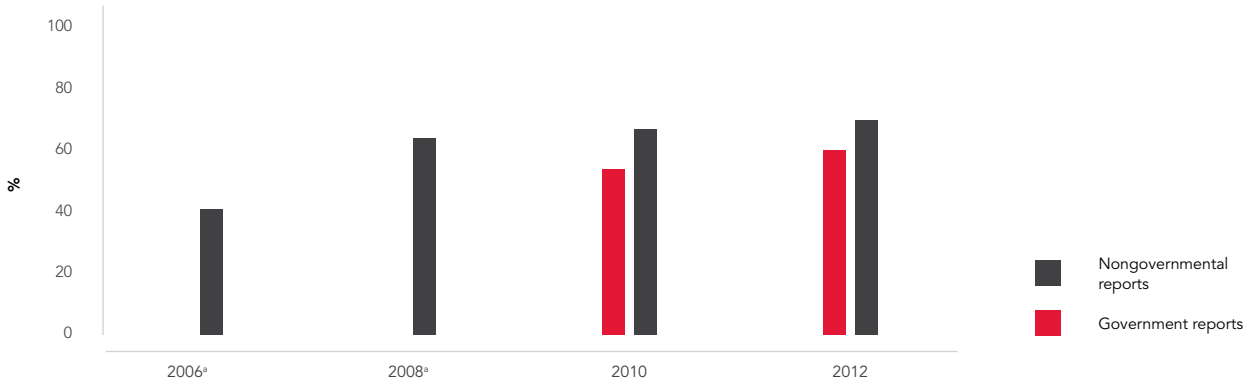
Some gains have been made in expanding access to justice for people living with HIV. The proportion of countries reporting the existence of HIV-related legal services has increased from 45% in 2008 to 55% in 2012, and the share of countries reporting to have trained judges and magistrates on HIV and discrimination rose from 46% to 57%. In 2012, 59% of countries indicated that mechanisms were in place to address cases of HIV-related discrimination, although coverage typically remains low *(3)*.

LAWS PUNISHING PEOPLE LIVING WITH HIV AND KEY POPULATIONS AT HIGHER RISK

Little progress has been made in reforming laws that discriminate against people living with HIV and other key populations at higher risk. In 2012, nongovernmental 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 (Fig. 8.3). Although these figures are clearly cause for concern, they are promising in another respect, since acknowledging the existence of such laws is a critical first step towards reforming them.

Fig. 8.3

Percentage of countries reporting having laws, regulations or policies that present obstacles to effective HIV prevention, treatment, care and support for key populations at higher risk and vulnerable groups, 82 countries reporting consistently for 2006–2012



[a] Governments were not asked this question in 2006 and 2008, and there are therefore no data for this.

Source: 2012 NCPI country reporting (www.unaids.org/ncpi).

As of 2012, about 60 countries have adopted laws that specifically criminalize HIV transmission, with some 600 convictions reported in 24 countries *(2,4)*. According to a 2012 global review, more than 40% of United Nations Member States (78 of 193 countries) criminalize same-sex relations, with some jurisdictions permitting imposition of the death penalty for convictions under such laws *(5)*. Similarly, a 2011 review *(6)* found that punitive policies pertaining to drug use – including criminalization of those dependent on drugs, compulsory drug detention or prohibiting syringe and needle programmes and other harm-reduction measures – undermine efforts to deliver life-saving HIV services for people who use drugs. Laws deeming some aspect of sex work to be illegal are in place in the majority of countries and are often used to justify harassment, extortion and violence against sex workers by police and clients, which places them at increased risk of HIV infection *(7)*. By contrast, some countries have reformed laws to decriminalize key populations at higher risk: for instance, Portugal decriminalized drug possession and use in 2000, and New Zealand adopted the Prostitution Reform Act 2003 that decriminalized sex work. Elsewhere, pragmatic arrangements have been made with police to ensure that law enforcement does not act as an obstacle to HIV prevention and treatment. Such programmes are reported, among others, in Australia, India, Indonesia, Papua New Guinea and Thailand *(8)*.

60

COUNTRIES CRIMINALIZE

In 2012, about 60 countries had laws criminalizing HIV transmission.

The urgent, evidence-informed recommendations of the Global Commission on HIV and the Law call on governments to review their legal frameworks and, as needed, repeal or reform laws to support a human rights–based AIDS response. The Global Commission recommended that countries prohibit HIV-related discrimination; refrain from explicitly criminalizing HIV exposure, non-disclosure or transmission; protect women and children in the context of HIV; use the law to ensure access to treatment; and take steps to remove punitive or discriminatory laws and policies regarding key populations at higher risk and vulnerable groups, including people who use drugs, sex workers, men who have sex with men, transgender people, prisoners and migrants *(2)*.

Particular stigma frequently affects refugees, who are often erroneously accused of increasing HIV-related risks for local communities. In reality, refugees frequently migrate from areas with lower HIV prevalence *(9)*, and experience demonstrates that access to information, goods and services within refugee camps improves knowledge and attitudes regarding safer sex (*10)*. In yet another sign of stigma and discrimination, asylum-seekers are sometimes required to undergo mandatory HIV testing to be granted refugee status.

PROGRAMMATIC EFFORTS ADDRESS STIGMA AND DISCRIMINATION

Specific programmatic initiatives are needed to accelerate progress towards the elimination of stigma and discrimination. In 2012, 81% of countries report having programmes in place to reduce stigma and discrimination as part of their national AIDS response *(3)*.

62%

In Round 10 of Global Fund grants, 62% included activities to address stigma and human rights, up from 13% in Round 8.

There are some signs that these efforts are showing results. In Lesotho, where instances of HIV-related stigma and discrimination have declined, more than 80% of the population reported in 2009 that they would be willing to care for a person living with HIV, would accept teachers living with HIV in the classroom or would buy fresh fruits and vegetables from a vendor living with HIV – a sharp increase over the 50–55% who responded favourably to the same questions in 2006 *(3)*. Haiti reports that a community-based stigma reduction campaign was associated with a significant increase in the number of people accessing testing for HIV and tuberculosis *(3)*. In the United States, the Patient Protection and Affordable Care Act also prohibits discriminatory private insurance practices against people living with HIV *(3)*.

People living with HIV are leading the way in combating HIV stigma and discrimination in many parts of the world. In a case brought by three women living with HIV who had been sterilized without their informed consent, the High Court of Namibia issued a ruling in July 2012 requiring medical practitioners to obtain informed consent before performing such a procedure *(3)*. A woman living with HIV in Vanuatu has travelled throughout the country to challenge the stigmatizing perceptions of communities, church groups and other stakeholders *(3)*.

Although programmatic gains have been made in addressing stigma and discrimination, more must be done. The percentage of Global Fund grants that include activities addressing stigma and human rights rose from 13% in Round 8 to 62% in Round 10, although such activities are frequently not integrated into grant work plans, budgets and performance frameworks *(11)*. However, a Global Fund review in July 2012 *(12)* found "only feeble advances in improvement of the human rights environment as concerns disease outcomes".

MOVING FORWARD TOWARDS 2015

The persistence of stigma, discrimination and punitive laws underscores the need for greatly expanded action to ground AIDS responses in human rights. Countries should take steps to better understand and address the factors that contribute to vulnerability to HIV and impede service access; take steps to measure and reduce stigma and discrimination; initiate legal reform as well as pragmatic steps to enforce protective laws and improve access to justice; and work to ensure a safe and dignified space to permit people living with HIV to lead the work against stigma and discrimination. The Positive Health, Dignity and Prevention policy framework provides a structure for this approach that places the voices, leadership and health of people living with HIV at the heart of any effective response to HIV *(13)*.

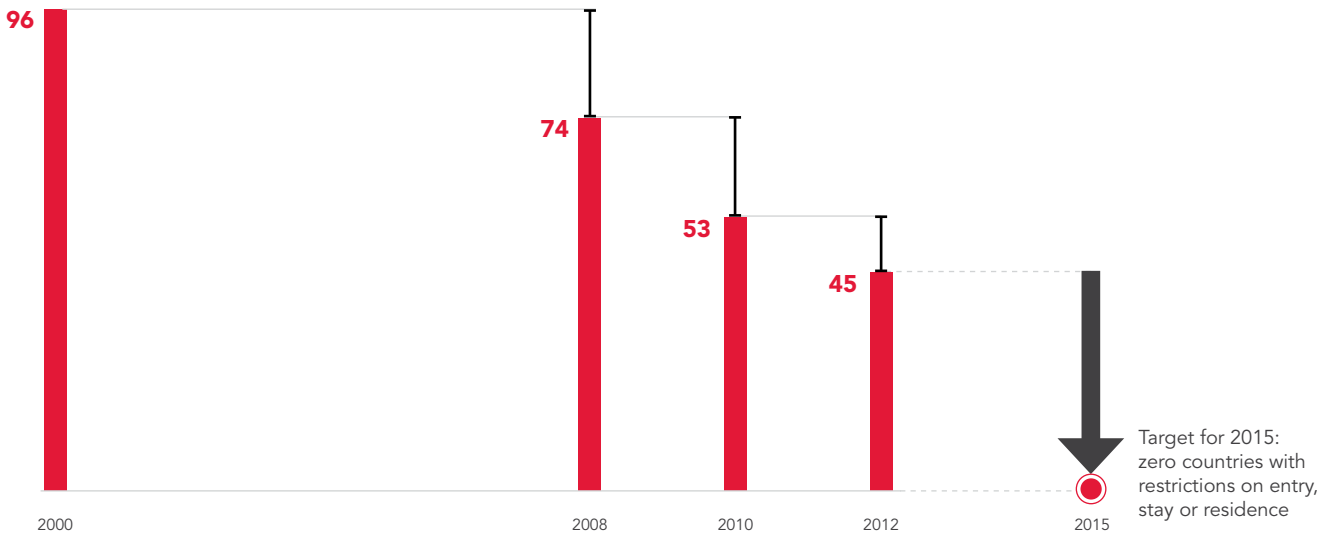
9 ELIMINATING RESTRICTIONS ON ENTRY, STAY AND RESIDENCE

There are encouraging signs that governments are rethinking their outdated and discriminatory HIV-related restrictions on entry, stay and residence, although countries need to accelerate progress to reach the goal of eliminating such restrictions by 2015.

Most of these restrictions were imposed in the early years of the epidemic, when little was understood about HIV prevention and effective HIV treatment did not exist. In 2012, governments increasingly recognize that these restrictions make no sense in a world in which HIV exists in every country, people living with HIV are living long and productive lives and equal freedom of movement is not only a human right but essential in a globalized world. Of note is the decline in the number of countries, territories and areas with HIV-related travel restrictions from 96 in 2000 to 45 in 2012 (Fig. 9.1).

Fig. 9.1

Number of countries with restrictions on entry, stay and residence for people living with HIV, 2000–2012 and 2015 target



Sources: 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 and 2012: UNAIDS database on HIV-related restrictions on entry, stay and residence.

Since 2010, Armenia, China, Fiji, Namibia, the Republic of Korea, the Republic of Moldova, Ukraine and the United States of America have repealed such restrictions, bringing their national laws into accordance with recommended international norms. Countries that have removed these restrictions have reported no negative effects, either in terms of costs or public health *(1)*.

The nature and severity of HIV-related restrictions on entry, stay and residence vary. Five countries (Brunei Darussalam, Oman, Sudan, United Arab Emirates and Yemen) maintain a blanket ban on entry by people living with HIV. Five other countries (Egypt, Iraq, Qatar, Singapore and Turks and Caicos Islands) require individuals wishing to stay for short periods (10–90 days) to demonstrate that they are HIV-negative. Laws in 20 countries provide for deporting individuals discovered to be living with HIV (Fig. 9.2). Where such restrictions continue to exist, other forms of HIV stigma and discrimination are usually common, including among nationals living with HIV.

20

COUNTRIES DEPORT

Laws in 20 countries provide for deporting individuals discovered to be living with HIV.

HIV-related restrictions on entry, stay and residence impose severe burdens on people living with HIV and their households. The effects of such restrictions are most severe for migrant workers, who play an increasingly prominent role in the global economy and in development. From 2005 to 2010, the number of international migrants rose from 191 million to 214 million *(2)*.

The negative consequences of HIV-related restrictions for migrant workers are vividly reflected by experience in the Gulf States, an important destination for millions of migrant workers. The six members of the Gulf Cooperation Council – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates – all mandatorily test people seeking to come to the Gulf countries to work and require them to be periodically tested to renew visas. Those who become HIV-positive while working in the Gulf are often quarantined, summarily deported, denied appropriate health care and ostracized upon returning to their home countries. The effects of such discriminatory treatment include mental trauma, stress and loss of income and opportunity. Migrants' HIV-positive test results are shared with all approved by the medical centres in the Gulf Cooperation Council, with such workers categorized as "permanently unfit" to enter any Gulf Cooperation Council country in the future, further denying opportunities *(3)*.

Over time, HIV-related restrictions on entry, stay and residence have clearly become not only discriminatory, lacking in scientific basis, but also counterproductive for business. "HIV-related travel restrictions not only hurt individuals, they hurt businesses," reports Chip Bergh, CEO of Levi Strauss & Co., a leading international apparel manufacturer. "In today's competitive landscape, where global business travel is essential, we need to be able to send our talent and skills where they are needed."

MOVING TOWARDS 2015

Swifter progress will be required to remove all HIV-related restrictions on entry, stay and residence by 2015. National coalitions or task forces can help to educate decision-makers and lay the groundwork for national action to remove such restrictions. Government officials, especially in health ministries, have an important role in showing how such restrictions do not protect public health and are irrational in today's world. Labour ministries also have a role to play in ensuring that discriminatory practices against labour migrants are halted. As businesses increasingly recognize the potential damage these restrictions pose to international business, the private sector constitutes a potentially powerful voice for eliminating them. Instead of such restrictions, sufficient HIV information and services for HIV prevention and treatment should be ensured for all those entering and leaving each country – nationals and non-nationals alike.

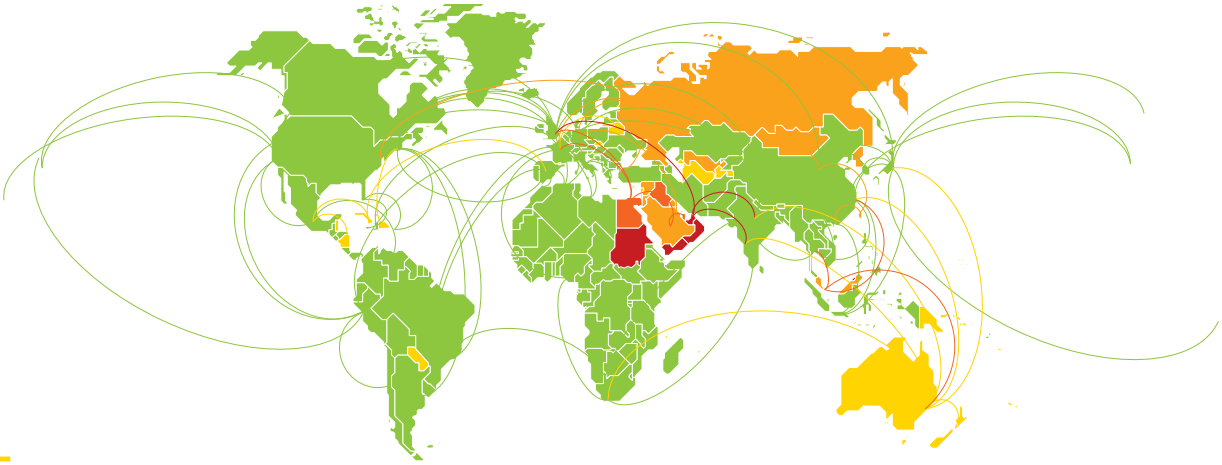
Fig. 9.2

Countries with HIV-related restrictions on entry, stay and residence in 2012

132 countries, territories and areas have no HIV-specific restriction on entry, stay and residence:

Albania
Antigua and Barbuda
Argentina
Armenia
Austria
Azerbaijan
Bangladesh
Barbados
Belgium
Benin
Bosnia and Herzegovina
Botswana
Brazil
Bulgaria
Burkina Faso
Burundi
Cambodia
Cameroon
Canada
Central African Republic
Chad
Chile
China
China, Hong Kong Special Administrative Region
Colombia
Congo
Costa Rica
Democratic Republic of the Congo
Côte d'Ivoire
Croatia
Czech Republic
Denmark
Djibouti
Dominica
Ecuador
El Salvador
Estonia
Ethiopia
Finland
Fiji
France
Gabon
Gambia
Georgia
Ghana
Greece
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Holy See
Hungary
Iceland
India
Indonesia
Iran (Islamic Republic of)
Ireland
Italy
Jamaica
Japan
Kazakhstan
Kenya
Kosovo[a]
Kyrgyzstan
Lao People's Democratic Republic
Latvia
Lesotho
Liberia
Libya
Liechtenstein
Luxembourg
Madagascar
Malawi
Maldives
Mali
Malta
Mauritania
Mexico
Micronesia (Federated States of)
Monaco
Montenegro
Morocco
Mozambique
Myanmar
Namibia
Nepal
Netherlands
Nigeria
Norway
Pakistan
Panama
Peru
Philippines
Poland
Portugal
Republic of Korea
Republic of Moldova
Romania
Rwanda
San Marino
Senegal
Serbia
Sierra Leone
Slovenia
Somalia
South Africa
Spain
Sri Lanka
Saint Kitts and Nevis
Saint Lucia
Swaziland
Sweden
Switzerland
United Republic of Tanzania
Thailand
The former Yugoslav Republic of Macedonia
Togo
Trinidad and Tobago
Tunisia
Turkey
Uganda
Ukraine
United Kingdom
United States of America
Uruguay
Vanuatu
Venezuela (Bolivarian Republic of)
Viet Nam
Zambia
Zimbabwe

[a] In accordance with United Nations Security Council resolution 1244 (1999).



45

countries, territories, and areas impose some form of restriction on the entry, stay and residence of people living with HIV based on their HIV status:

Andorra
Aruba
Australia
Bahrain
Belarus
Belize
Brunei Darussalam
China, Province of Taiwan
Comoros
Cuba
Cyprus
Democratic People's Republic of Korea
Dominican Republic
Egypt
Iraq
Israel
Jordan
Kuwait
Lebanon
Lithuania
Malaysia
Marshall Islands
Mauritius
Mongolia
New Zealand
Nicaragua
Oman
Papua New Guinea
Paraguay
Qatar
Russian Federation
Samoa
Saudi Arabia
Singapore
Slovakia
Solomon Islands
Sudan
Syrian Arab Republic
Tajikistan
Tonga
Turkmenistan
Turks and Caicos Islands
United Arab Emirates
Uzbekistan
Yemen

20

countries deport individuals once their HIV-positive status is discovered:

Bahrain
Brunei Darussalam
China, Province of Taiwan
Democratic People's Republic of Korea
Egypt
Iraq
Jordan
Kuwait
Malaysia
Mongolia
Oman
Qatar
Russian Federation
Saudi Arabia
Singapore
Sudan
Syrian Arab Republic
United Arab Emirates
Uzbekistan
Yemen

5

countries require that a person be able to show they are HIV negative to be allowed to stay for even short periods (10 to 90 days):

Egypt
Iraq
Qatar
Singapore
Turks and Caicos Islands

5

countries have a complete bar on the entry and stay of people living with HIV:

Brunei Darussalam
Oman
Sudan
United Arab Emirates
Yemen

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

10 INTEGRATION

With the aim of taking AIDS out of isolation, the 2011 Political Declaration on HIV and AIDS: Intensifying Our Efforts to Eliminate HIV and AIDS *(1)* calls for eliminating parallel systems for HIV-related services, broader health systems strengthening and integrating the AIDS response in global health and development efforts. A more integrated approach will strengthen the reach and impact of the AIDS response, leverage HIV-related gains to generate broader health and development advances and enhance the long-term sustainability of the AIDS response.

The AIDS movement has a tradition of leadership emerging from marginalized groups and refuses to accept that cutting-edge medicine is reserved for high-income countries and is therefore at the forefront of health and development efforts determined to shape a new world *(2)*.

As the reach of AIDS programmes has expanded, so too have opportunities to integrate HIV into broader health efforts, and the resulting systems are proving greater than the sum of their parts. The number of health facilities with integrated HIV and TB screening, diagnosis and treatment has rapidly increased since 2005, with especially noteworthy progress in sub-Saharan Africa, the region with the highest prevalence of HIV, TB and HIV and TB coinfection *(3)*. According to a recent programme evaluation of 16 community clinics and a district hospital in rural Swaziland, integrating TB case-finding into routine HIV care delivery is both operationally feasible and effective *(4)*. In 2012, South Africa launched an integrated five-year strategy addressing HIV, TB and sexually transmitted infections.

Services to prevent children from acquiring HIV infection have been integrated into maternal and child health services in all 22 priority countries of the Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. A review of 10 studies in diverse countries found that integrating provider-initiated HIV testing and counselling into antenatal settings increased testing levels by 10–66%, with testing uptake of at least 85% found in 8 studies *(5)*. However, such gains are threatened in settings with limited access to facility-based antenatal care or weak systems for commodity forecasting, procurement and supply chain management.

HIV is also being integrated into sexual and reproductive health services in countries all over sub-Saharan Africa. For example, Tanzania, Malawi, Botswana, Burkina Faso and Zimbabwe have recently completed rapid assessment to inform their strategies and to determine priorities for their national plans towards the

scale-up and intensification of integration. Kenya is evaluating a national strategy that, beginning in 2002, integrated HIV counselling and testing into family planning services. Measuring the effectiveness and impact of these links has been hindered by the lack of standard indicators, prompting a group of experts from national governments, donors, United Nations agencies and civil society to identify a set of relevant indicators.

As access to antiretroviral therapy expands and survival improves for people living with HIV, HIV care and treatment programmes are increasingly focusing on managing chronic disease. In Ethiopia *(6)*, lessons learned in the AIDS response are now informing clinical management of diabetes; two Médicins Sans Frontières clinics in Cambodia *(6)* have combined services for HIV, diabetes and hypertension; FHI360 has added services for noncommunicable diseases to existing HIV programmes in Kenya *(6)*; and South Africa *(6)* has embarked on an integrated testing campaign focused on HIV, high blood pressure and diabetes *(7)*. The September 2011 United Nations High-Level Meeting on Non-communicable Diseases renewed global efforts in tacking these growing challenges; arising from the Summit, UNAIDS and WHO have agreed to accelerate collaboration in integrating HIV and noncommunicable disease programmes.

Opportunities to multiply beneficial outcomes through joint approaches with AIDS initiatives exist across the range of social and economic development programmes. A recent review by the World Bank of more than 120 cash transfer programmes in sub-Saharan Africa *(8)* demonstrated that some types of social protection investment addressing economic and social vulnerabilities of those in greatest need are already reaching households with orphans and vulnerable children and high rates of dependence, providing opportunities for the most vulnerable HIV-affected households to leverage resources, mitigating the impact of the epidemic.

An estimated 10% of the world's population is living with disabilities *(9)*. Although there are few data on the prevalence of HIV infection among people with disabilities, studies on hearing-impaired populations suggest a prevalence equal to or higher than that of the rest of the community *(10)*. In 2012, 71% of countries reported that their multisectoral AIDS strategy included integrated efforts to address people with disabilities *(7,11)*.

71

COUNTRIES INTEGRATE DISABILITIES

In 2012, 71 countries reported multisectoral AIDS strategies that integrate efforts to address people with disabilities.

Given the particular effects of HIV on marginalized and often criminalized populations, criminal justice and law enforcement programming is a clear candidate for more integrated efforts. One-time training sessions for police are giving way to an integrated approach, in which HIV becomes a permanent part of curricula and in-service training for uniformed services in several countries. For example, harm reduction began to be integrated into the training of the Royal Malaysian Police in 2009, and HIV training has been integrated at all levels of police in Nepal.

The Thai sex worker organization SWING partnered with the National Police Cadet Academy of Thailand in an effort to overcome a pattern of persistent violence and abuse male sex workers felt they were subjected to by police officers. Four years of an annual training programme created a core of police cadets on which sex workers and SWING have continued to be able to draw, with positive changes in the attitudes of police officers noted and new avenues of redress available in cases of harassment *(12)*.

MOVING FORWARD TOWARDS 2015: TAKING AIDS OUT OF ISOLATION

Maximizing synergy and integrating HIV responses into wider health and development efforts are critical to the effectiveness and sustainability of the response. The many programmatic opportunities for integration now require a more systematic evidence base that refines the current understanding of where, when and how programmes should optimally be placed and the circumstances in which positive synergy between programmes can be realized. Indicators for integrated approaches – and the integration of existing monitoring systems in different sectoral platforms – need to be developed, allowing regular reporting to track progress in integration.

Box 10.1. Improving integration and increasing the involvement of men in reproductive, maternal, child and newborn health services

The involvement of men in the health of their families, whether as fathers or sexual partners, is now acknowledged to have beneficial effects *(13–15)*. Providing services jointly to partners, instead of separate individuals, is associated with behaviour change to protect the uninfected partner and can significantly reduce the risk of HIV transmission *(15)*. Many countries are therefore experimenting with various strategies to strengthen opportunities for engaging men within service delivery *(16,17)*.

Efforts are being made in numerous situations to integrate services for men into reproductive, maternal, newborn and child health services. Increasing the number of male health personnel providing HIV services, offering men's services in parallel with reproductive, maternal, newborn and child health services and providing services for couples are all examples of innovative and promising initiatives.

Studies in Rwanda and Zambia *(18,19)* have shown that the engagement of men was associated with a two thirds reduction in the number of people newly infected with HIV. Where couples counselling is offered, it must be sensitive to the needs of the women who may be deterred by the "requirement" that their husbands or partners attend with them. Similarly, programmes need to be sensitive to the fact that some pregnant women may not have partners.

In an effort to improve HIV services for men while expanding services to prevent mother-to-child transmission, Rwanda has developed a family package of support. The integrated package of services is in accordance with national strategies to prevent children from acquiring HIV infection but also emphasizes the participation of men and encourages male partners to participate in HIV counselling and testing. Elements of the campaign include:

- promoting HIV counselling and testing for couples as a national strategy;
- mobilizing communities with local authorities and community health-care workers;
- building the capacity of health care personnel on HIV counselling and testing for couples;
- organizing weekend HIV counselling and testing sessions for partners who are not available on weekdays; and
- introducing invitation letters for male partners.

The family package approach has been credited with a dramatic increase in couple testing, from a national average of 33% of male partners being tested in 2005 to 78% in 2008. The number of couples tested through the programme for preventing mother-to-child transmission increased from 58 700 in 2005 to 229 200 in 2008. Within the programme, HIV testing coverage increased from 10% of the total number of expected pregnant women in 2002 to 50% in 2005 and 75% in 2008. The prevalence of HIV among pregnant women and their male partners also declined: from 9.1% in 2003 to 3.0% in 2008 among pregnant women and from 10.2% in 2003 to 3.1% in 2008 among male partners *(20)*.

A study of 456 pregnant women living with HIV and 140 partners in Kenya *(21)* showed that the women with a male partner attending at antenatal care had a 45% lower combined risk of the infant acquiring HIV infection or dying among compared with those with no male partner attending.

Box 10.2. Pink Ribbon Red Ribbon

Pink Ribbon Red Ribbon is an innovative global health public private partnership that builds on the lessons and experiences gained in the AIDS response to combat cervical cancer and breast cancer in countries in sub-Saharan Africa and Latin America. Led by the George W. Bush Institute, UNAIDS, the United States President's Emergency Plan for AIDS Relief and Susan G. Komen for the Cure, Pink Ribbon Red Ribbon is working to expand the availability of vital cervical cancer screening and treatment – especially for women living with HIV at high risk – and to promote breast cancer education.

Pink Ribbon Red Ribbon uses the scaling up of HIV prevention and treatment as a platform to provide additional life-saving prevention and treatment services to women, including human papillomavirus prevention and cervical cancer screening and treatment. Human papillomavirus coinfection is common among people living with HIV, in part because HIV and human papillomavirus share a set of risk factors and both are transmitted sexually. Infections with high-risk strains of human papillomavirus, when undetected and untreated, are the leading cause of cervical cancer in women and penile and anal cancer in men. The prevalence of human papillomavirus is often higher among people living with HIV *(22)*.

Launched in September 2011, Pink Ribbon Red Ribbon has already making significant progress. Using the convening power and leadership of UNAIDS to ensure high-level commitment to achieving the goals of Pink Ribbon Red Ribbon in project countries, UNAIDS country offices have worked closely with the Governments of Botswana and Zambia to develop strategies for integrating cervical cancer screening into HIV services. Efforts to provide high-level advocacy and communication strategies linking HIV responses with cervical and breast cancer have generated calls to include preventing cervical cancer in the next Rwanda National Strategic Plan on HIV and AIDS (2013–2017) and to include cervical cancer in the Botswana National Operational Plan on HIV 2012–2016. As a part of the focus on mobilizing women living with HIV to become involved in planning and programme reviews, the United Nations Joint Team in Rwanda is advocating for including civil society organizations, especially women's organizations, in national plans on HIV and cervical cancer.

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