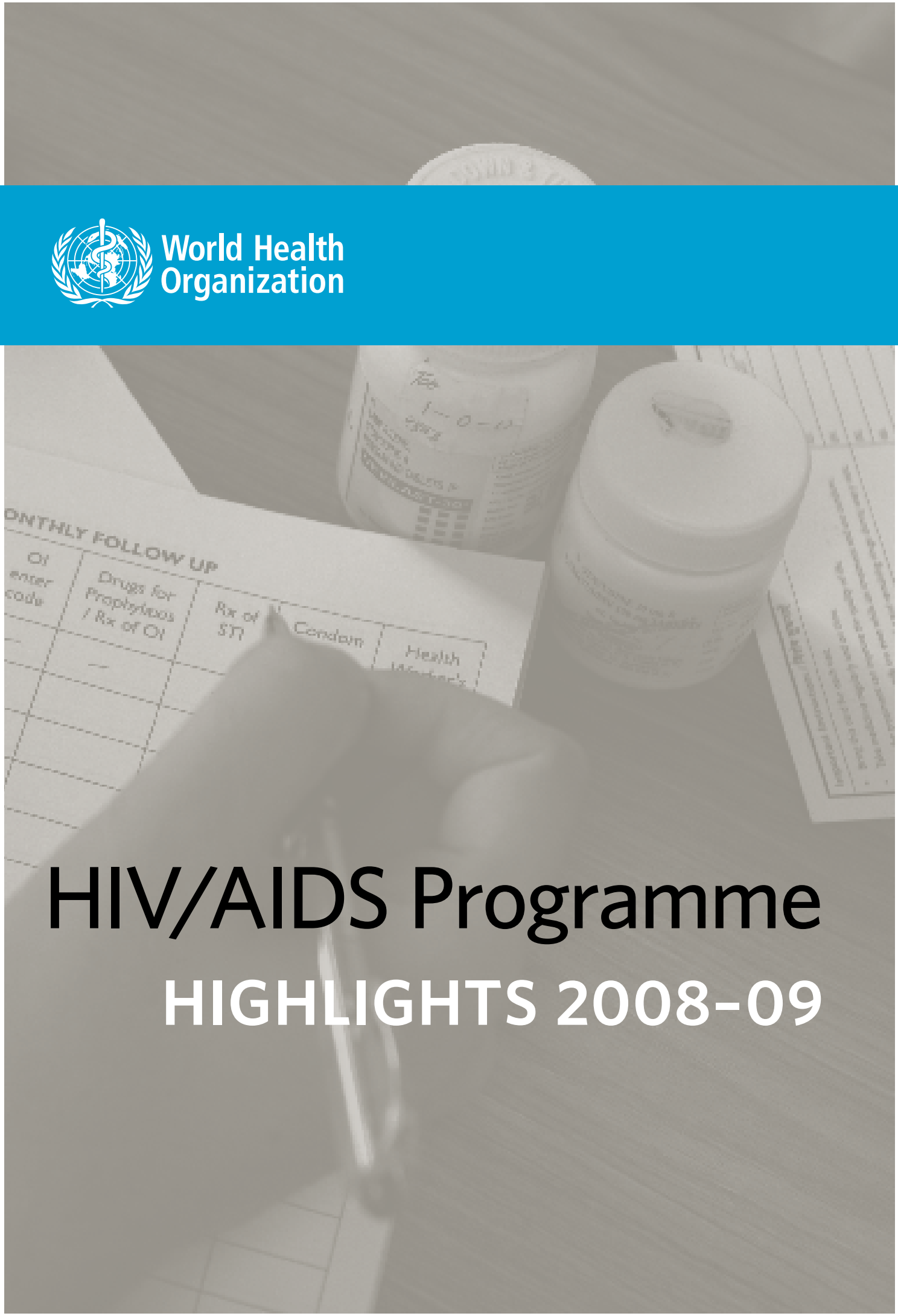
World Health Organization



HIV/AIDS Programme

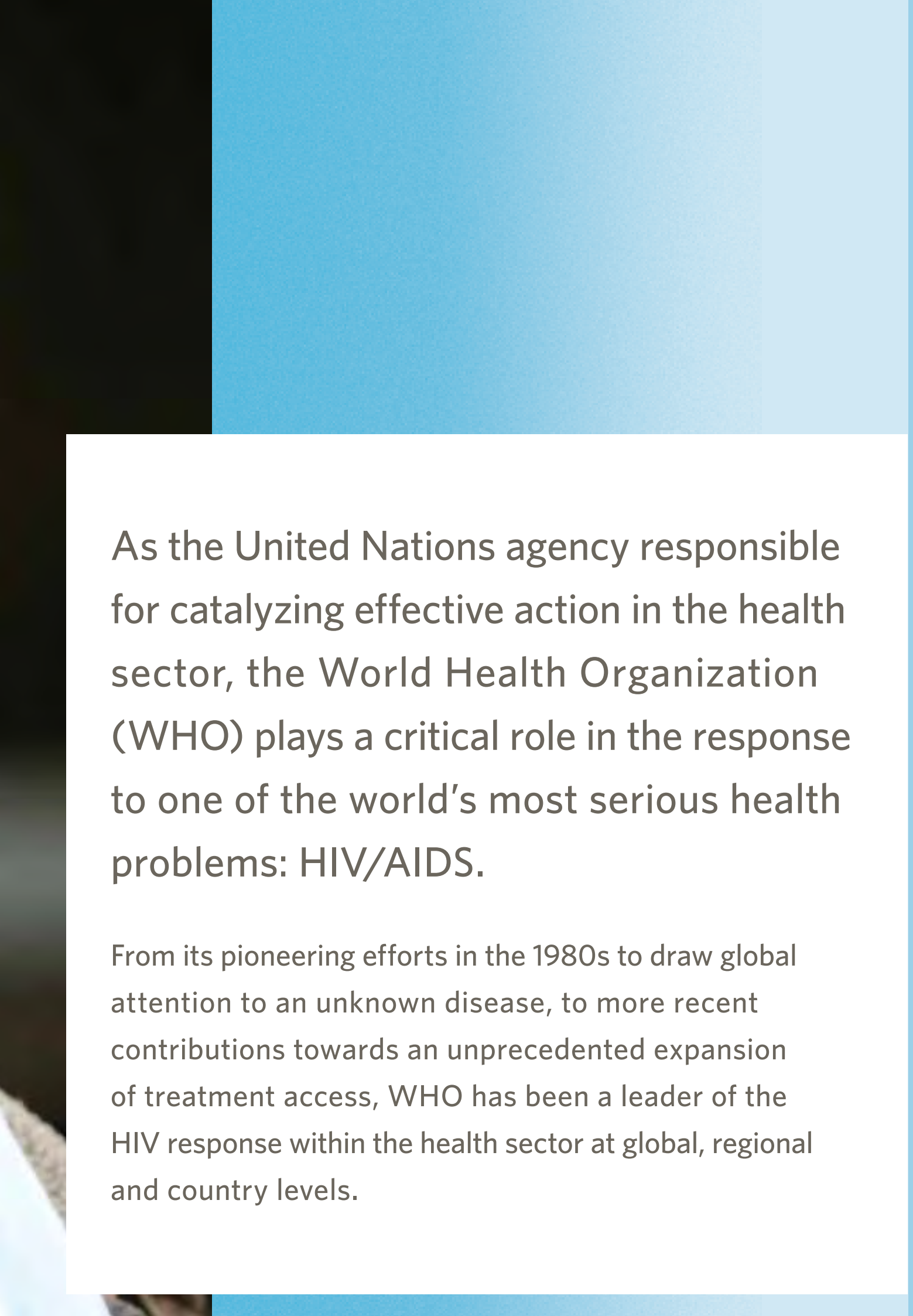
HIGHLIGHTS 2008-09

World Health Organization

HIV/AIDS Programme

HIGHLIGHTS 2008–09

Hileni, pictured here, is one of an estimated 33.4 million people living with HIV globally. Sub-Saharan Africa remains the region most heavily affected by the virus, accounting for two-thirds (67%) of all people living with HIV. Throughout the region, an estimated 60% of HIV infections are in women.



As the United Nations agency responsible for catalyzing effective action in the health sector, the World Health Organization (WHO) plays a critical role in the response to one of the world's most serious health problems: HIV/AIDS.

From its pioneering efforts in the 1980s to draw global attention to an unknown disease, to more recent contributions towards an unprecedented expansion of treatment access, WHO has been a leader of the HIV response within the health sector at global, regional and country levels.


ARMANI

IN 2006, countries gathered at the United Nations General Assembly unanimously endorsed the goal of Universal Access to HIV prevention, treatment, care and support. In the response to HIV, global leaders determined, no person, community or country should be left behind.

Universal Access is more than a time-limited aspiration that expires in 2010. It is—and will remain—a unifying principle for the HIV response. Achieving and sustaining Universal Access will be pivotal to progress towards the full array of Millennium Development Goals, including Goal 6, which calls for the world to halt and begin to reverse the HIV epidemic by 2015.

A sustained response to HIV requires the engagement of all sectors of society. The health sector's contribution is especially vital, accounting for at least 55% of all resources required to mount an effective global response to the epidemic.

In the quest towards Universal Access, WHO aims to ensure that the health sector achieves maximum impact in five strategic areas:

STRATEGIC DIRECTION 1

Enabling individuals to know their HIV status

STRATEGIC DIRECTION 2

Maximizing the health sector's contribution to HIV prevention

STRATEGIC DIRECTION 3

Accelerating the expansion of HIV treatment and care

STRATEGIC DIRECTION 4

Strengthening and expanding health systems

STRATEGIC DIRECTION 5

Investing in strategic information in an effort to better inform the HIV response

This report highlights WHO's contributions towards Universal Access in 2008 and 2009. It describes how WHO works and identifies specific achievements in each of the five strategic areas. While the organization's contributions to the HIV response draw upon the initiatives and expertise of WHO's six regional and 140 country offices, as well as roughly 30 different departments within WHO Headquarters, this report focuses particular attention on achievements of the HIV/AIDS Department in the 2008–09 biennium.

HIV: a continuing global challenge

HIV is the world's leading infectious killer, with an estimated 2 million AIDS deaths occurring in 2008 alone. Even with improved treatment access, HIV remains the leading cause of death among women between 15 and 44 years of age.

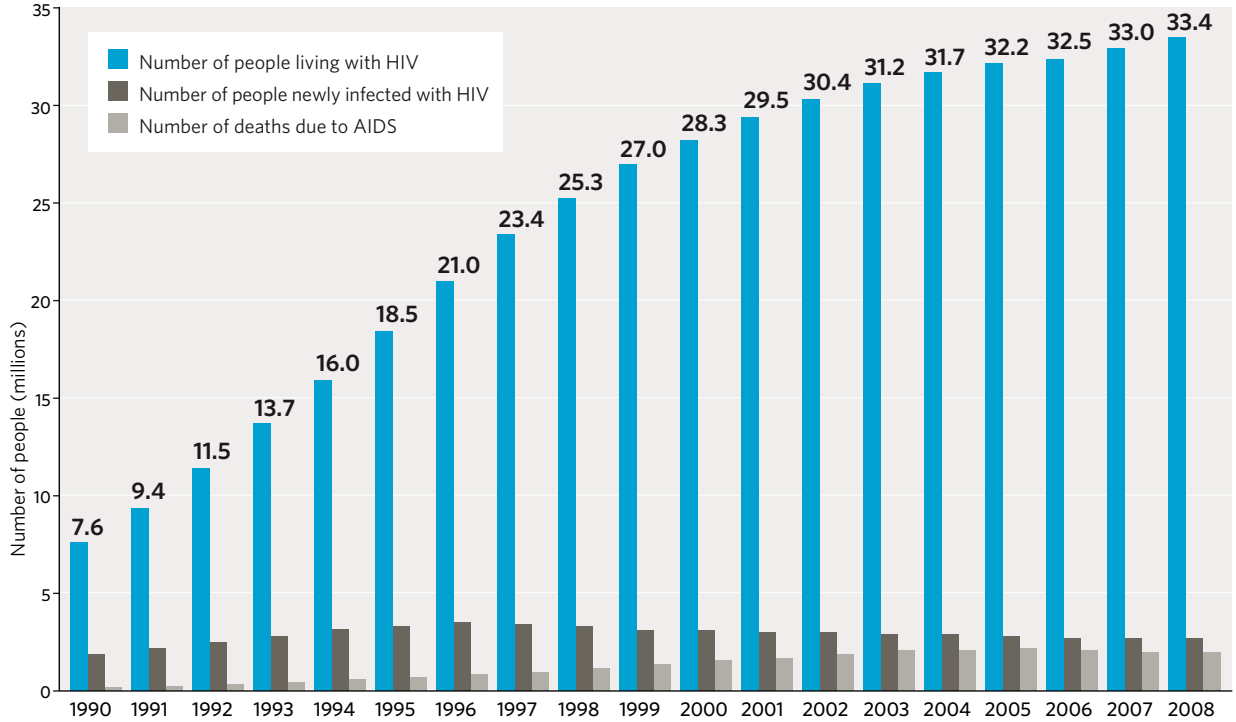
The global HIV burden remains enormous. At the end of 2008, an estimated 33.4 million people worldwide were living with HIV. That same year, some 2.7 million people became newly infected with the virus. More than 95% of all HIV-positive people are in low- and middle-income countries.

The epidemic continues to exact an especially heavy toll on sub-Saharan Africa, home to two thirds of people living with HIV; more than 14 million children in this region under the age of 15 have lost one or both parents to AIDS. In all regions, the epidemic is causing severe harm to key marginalized populations, such as sex workers, injecting drug users, men who have sex with men, transgender individuals, migrants, and prisoners.

This decade has been one of extraordinary achievements in the global fight against HIV. However, the epidemic continues to outpace the HIV response. Even though HIV treatment access has expanded 10-fold in five years, only 42% of people in low- and middle-income countries who needed treatment under WHO guidelines applicable in 2008 were receiving antiretroviral (ARV) drugs. With a 2009 revision of WHO guidelines prompted by new scientific evidence, the number of people requiring antiretroviral therapy (ART) will increase significantly.

For every two individuals who start antiretroviral therapy each year, five people are newly infected. As the rate of new infections continues to outstrip the expansion of treatment access, the long-term queue for HIV treatment lengthens, underscoring the urgent need to further intensify both prevention and treatment efforts.

Number of people living with HIV, number of people newly infected with HIV and number of AIDS deaths in the world, 1990–2008



WHO helps countries translate *evidence* into strategic *action*

Translating evidence into action

When new evidence emerges, WHO convenes experts to evaluate the data and begin the process of translating new information into normative guidance. For example, in the wake of compelling evidence that male circumcision reduces the risk of female-to-male HIV transmission, WHO brought together a wide range of stakeholders to evaluate the role that male circumcision plays in HIV prevention. This resulted in the global adoption of male circumcision as a new HIV prevention technology.

After assessing available data, WHO produces normative guidance for countries and other partners in the form of guidelines, toolkits, and documentation of best practices. Many countries throughout the world depend on this guidance to develop effective policies and programmes. In sub-Saharan Africa, all 46 countries are using WHO-recommended treatment guidelines to increase access to ARV drugs, and 23 countries are using standardized WHO/IMAI modules[1] to inform clinical practice. All countries in the region are using WHO guidelines and tools to scale up HIV services for the prevention of mother-to-child transmission.

WHO has taken steps to make its guidance as user-friendly as possible. In 2008, WHO launched *Priority interventions: HIV/AIDS prevention, treatment and care in the health sector*,[2] a compilation of WHO-recommended interventions that constitute a comprehensive health sector response to HIV. The tool describes each intervention, summarizes the evidence for its effectiveness, and provides references to key policy and programmatic guidelines. This 'one-stop-shop' is updated regularly with the most current evidence and tools.

Because the epidemic varies widely—between and within countries and regions—WHO's regional offices frequently tailor generic guidance to address specific needs and circumstances. WHO technical experts based in six regional offices and 140 countries provide strategic and technical advice to governments, civil society, programme implementers and other partners to help ensure that evidence-based guidelines are translated into action.

WHO supports programme implementation through workshops, training courses, and direct technical assistance. Supporting national health ministries, WHO's country-based experts help shepherd new guidelines through the national development and approval process. In all cases, countries themselves determine the content of their guidelines, but they benefit from extensive WHO technical support.

Critical to the process of developing and implementing norms, standards and policies is the engagement of key stakeholders, notably people living with HIV and broader civil society. WHO actively involves these groups in technical consultations, guideline development, capacity building and other key areas of its work at national, regional and global levels.

Complementing WHO's technical experts are Knowledge Hubs[3] and WHO Collaborating Centres[4] which also deliver technical support to facilitate the translation of evidence into action. These resources enable national partners to readily access the support they need to address capacity gaps and implement evidence-based programmes.

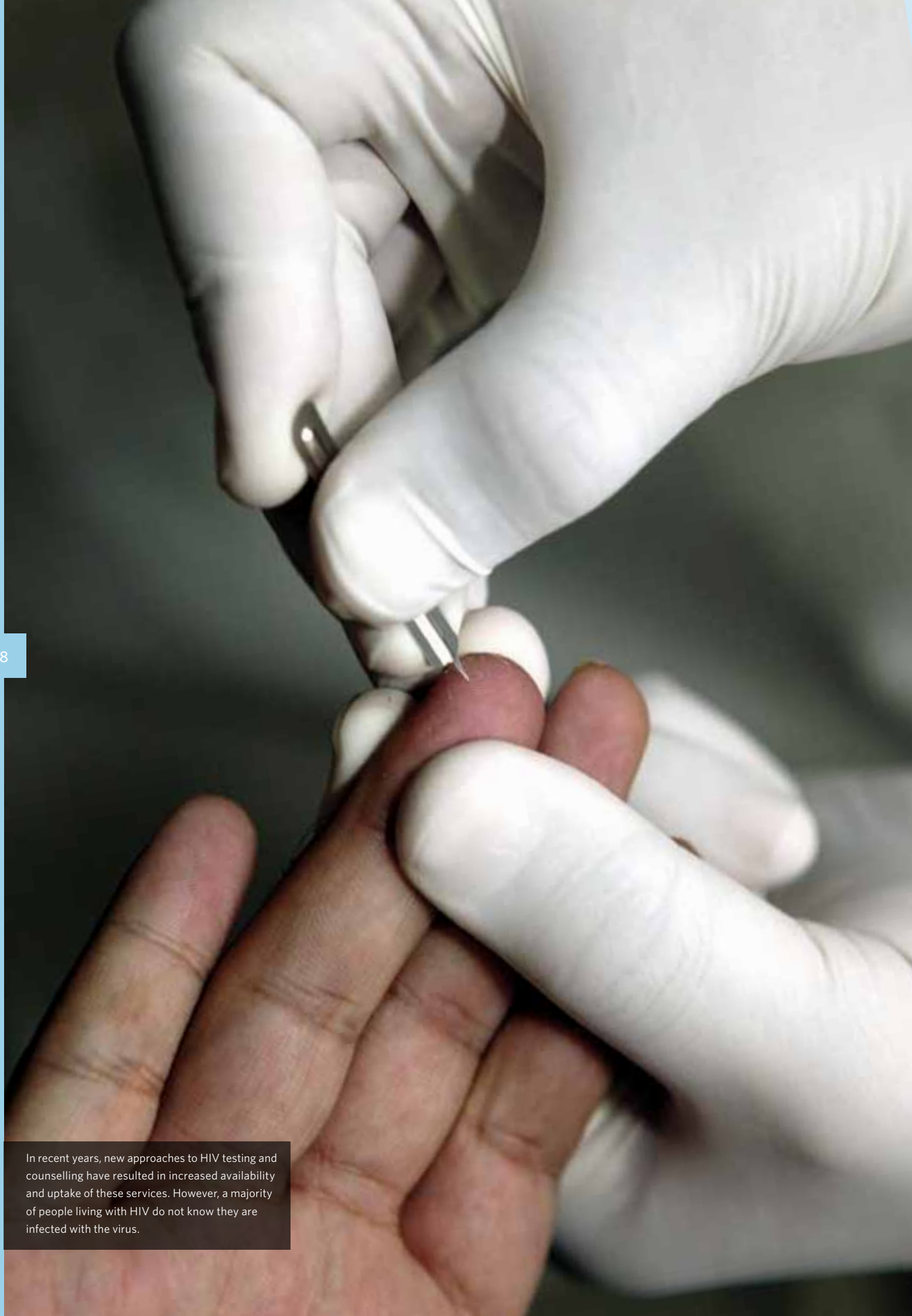
The remainder of this report explores how these various mechanisms support robust, sustainable action in countries to respond to HIV/AIDS in each of WHO's strategic priority areas of work.

1 IMAI refers to the Integrated Management of Adolescent and Adult Illness, a WHO management and training tool aimed at scaling up key health services in resource-limited settings. See section 4 for more information.

2 To access the latest version of *Priority interventions*, visit: http://www.who.int/hiv/pub/priorityinterventions/en/

3 Building on existing institutions, Knowledge Hubs tailor WHO's generic guidance to country context, provide training and capacity building in regions, establish technical networks to support partners, and deliver direct technical assistance.

4 Institutions become accredited as WHO Collaborating Centres after having worked with WHO over a course of several years.



In recent years, new approaches to HIV testing and counselling have resulted in increased availability and uptake of these services. However, a majority of people living with HIV do not know they are infected with the virus.

Working together: WHO in partnership

No organization on its own is capable of addressing the myriad challenges posed by HIV/AIDS. As an agency that focuses on evidence-based guidance and technical support, WHO works in partnership with a broad range of stakeholders to catalyze action on HIV/AIDS.

First and foremost, WHO supports national health officials to develop and implement guidelines and monitor national progress. This day-to-day technical support and guidance help countries build their capacity for the development, implementation and monitoring of HIV programmes.

As one of six original Cosponsoring Organizations of the Joint United Nations Programme on HIV/AIDS (UNAIDS), WHO collaborates with the UNAIDS Secretariat and other Cosponsors to maximize the coherence and strategic impact of the UN's HIV-related efforts. WHO works with individual UNAIDS Cosponsors and the UNAIDS Secretariat on key issues—such as the United Nations Children's Fund (UNICEF) on prevention of mother-to-child transmission of HIV, the United Nations Office on Drugs and Crime (UNODC) on HIV prevention for people who inject drugs, and the UNAIDS Secretariat on HIV surveillance.

WHO also provides extensive assistance to donors to optimize the effectiveness of external HIV support. For example, WHO has worked closely with the United States President's Emergency Plan for AIDS Relief (PEPFAR) to harmonize and implement normative guidance, patient monitoring protocols, and monitoring and evaluation approaches in low- and middle-income countries.

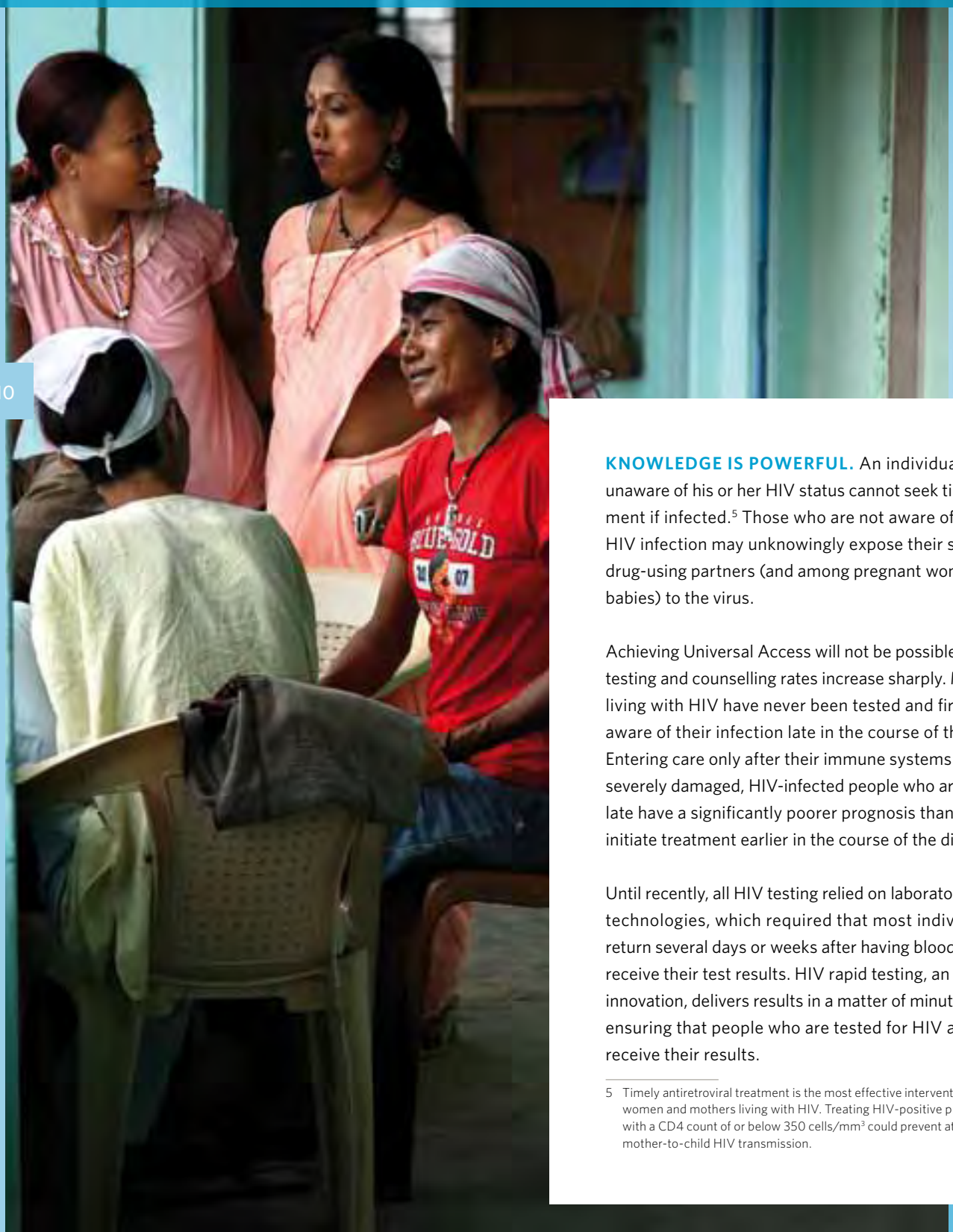
The creation in 2002 of the Global Fund to Fight AIDS, Tuberculosis and Malaria represented a breakthrough in the HIV response, and the Global Fund has been a critical WHO partner from its inception. WHO helps countries develop successful proposals to the Global Fund and assists them with grant and programme management, implementation, monitoring and reporting. WHO also provides extensive support to the Global Fund's technical review panel, aiming to ensure that funded programmes incorporate policies and interventions based on the best available evidence.

At global, regional and country levels, civil society plays a vital role in the HIV response and serves as an essential WHO partner. WHO has consistently advocated for an approach to the epidemic that recognizes the critical importance of engaging civil society in national HIV responses. In 2009, for the first time, people living with HIV were part of WHO's global consultative process in the revision of HIV-related prevention, treatment, and infant feeding guidelines, providing the unique perspective of lived experience. Civil society is the recipient of much of the technical support provided by WHO.

"When we first started providing antiretroviral therapy in 2003, there were no doctors trained in ART management," said Dr Refanas Kooper, who heads the ART clinic at Katutura State Hospital in Windhoek, Namibia. "We began training doctors using WHO guidelines, then adapted the guidelines to our country settings." Some 5000 HIV-positive adults and 1100 children now receive regular ART at the clinic.

STRATEGIC DIRECTION 1

HIV testing and counselling



KNOWLEDGE IS POWERFUL. An individual who is unaware of his or her HIV status cannot seek timely treatment if infected.[5] Those who are not aware of their own HIV infection may unknowingly expose their sexual and drug-using partners (and among pregnant women, their babies) to the virus.

Achieving Universal Access will not be possible unless HIV testing and counselling rates increase sharply. Most people living with HIV have never been tested and first become aware of their infection late in the course of the disease. Entering care only after their immune systems have been severely damaged, HIV-infected people who are diagnosed late have a significantly poorer prognosis than those who initiate treatment earlier in the course of the disease.

Until recently, all HIV testing relied on laboratory-based technologies, which required that most individuals return several days or weeks after having blood drawn to receive their test results. HIV rapid testing, an important innovation, delivers results in a matter of minutes, thereby ensuring that people who are tested for HIV actually receive their results.

5 Timely antiretroviral treatment is the most effective intervention for pregnant women and mothers living with HIV. Treating HIV-positive pregnant women with a CD4 count of or below 350 cells/mm^3 could prevent at least 75% of all mother-to-child HIV transmission.

Prior to 2007, the health sector relied primarily in many settings on a client-initiated model of HIV testing and counselling, known as voluntary counselling and testing (VCT). This approach largely depends on clients' willingness to seek testing on their own, typically at a health or community-based facility. Client-initiated testing strategies do not generate sufficient uptake due to low service coverage, the deterrent effects of stigma and discrimination, and the perception by many people—even in high-prevalence areas—that they are not at risk.

In recent years, WHO and UNAIDS have promoted a new approach to HIV testing and counselling whereby health-care providers specifically recommend an HIV test to patients attending health facilities in certain settings. Known as provider-initiated testing and counselling (PITC), this approach aims to boost testing uptake, improve access to health services for people living with HIV, and create new opportunities for HIV prevention among both HIV-positive and HIV-negative people.[7]

This new guidance has had a swift impact. With the move to PITC and increased use of rapid testing technologies, there has been a sharp rise in the number of people tested for HIV: in 39 low- and middle-income countries, for example, the total reported number of HIV tests more than doubled between 2007 and 2008. In 66 high-burden countries, the reported number of HIV testing and counselling sites increased by approximately 35%, from 25 000 in 2007 to 33 600 in 2008.

Even with the notable progress in greater testing uptake, the majority of people living with HIV are unaware of their HIV status. In some countries, such as Liberia and the Democratic Republic of Congo, 90% or more of people living with HIV do not know they are infected, according to recent population-based surveys. Particularly pronounced testing gaps have been reported for key populations at highest risk of HIV exposure.[8]

WHO is working to address the factors that continue to impede timely diagnosis of HIV infection in resource-limited settings. In sub-Saharan Africa, for example, WHO is coordinating a comparative research project, the MATCH study, to assess the effects of various factors in encouraging HIV testing uptake.[9] In the Americas, WHO's Regional Office is pursuing the 'Know Your Status' initiative to help countries enhance and expand communications efforts to promote HIV testing and counselling. WHO is supporting similar initiatives in Europe and Asia.

7 For more information on provider-initiated testing and counselling, please visit: http://www.who.int/hiv/pub/vct/pitc/

8 In 2008, country reports indicated that among those surveyed, 38% of sex workers (45 countries), 30% of men who have sex with men (31 countries), and 23% of people who inject drugs (26 countries) received HIV testing and counselling services.

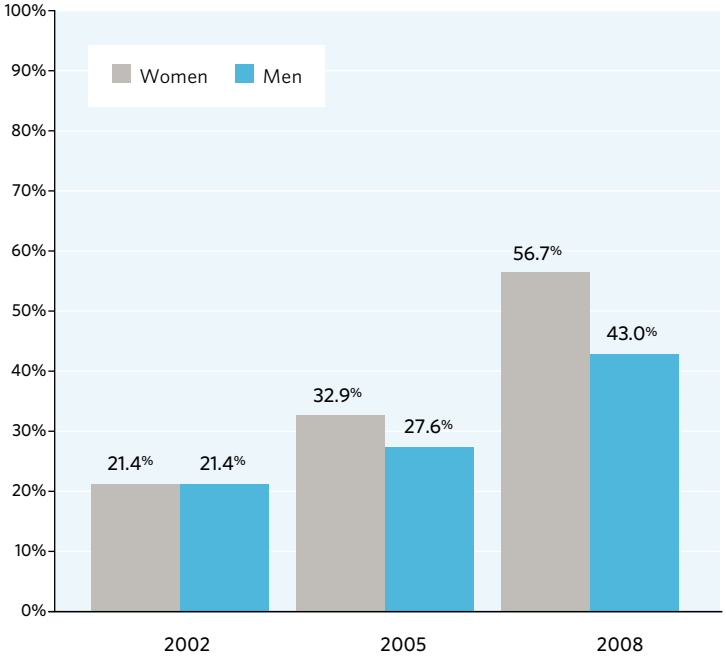
9 The MATCH (Multi-country African Testing and Counselling for HIV) study is being conducted in Burkina Faso, Kenya, Malawi and Uganda.

REGIONALLY-ADAPTED COUNSELLING TOOLS

While there are many HIV counselling resources, few focus on regional aspects of the epidemic. In collaboration with UNICEF and Family Health International, WHO recently published *The HIV counselling resource package for the Asia Pacific*[6] in 2009. Tailored to the socio-cultural and epidemiological aspects of the region, the package is focused on meeting the specific needs of women, children and most-at-risk populations and takes into account the wide-ranging backgrounds of counsellor trainees.

6 To access these materials, visit: http://www.who.int/hiv/pub/vct/asia-pacific/en/

Percentage of women and men (> = 15 years) who had ever received an HIV test and test results, South Africa, 2002, 2005 and 2008



SCALING UP HIV TESTING IN MALAWI

WHO has for several years supported Malawi in its successful efforts to increase HIV testing uptake. With assistance from WHO, Malawi uses a combination of provider-initiated and voluntary counselling and testing sites, mobile testing services, home-based door-to-door outreach, and an annual national campaign that blankets the country with testing promotion messages. The annual number of HIV tests administered in Malawi rose from 149 540 in 2002 to 1.7 million in 2008.

STRATEGIC DIRECTION 2

Prevention through the health sector

STRENGTHENING HIV PREVENTION remains an urgent global health imperative. With young people under the age of 25 accounting for nearly one in two new HIV infections worldwide, improved HIV prevention is critical to preserving and promoting the health and well-being of future generations on whom societies will depend for their economic and social development.

Effective HIV prevention relies on the strategic, simultaneous implementation of multiple evidence-based strategies. These include interventions focused on populations with unknown (or HIV-negative) status, such as correct and consistent condom use, HIV testing and counselling, male circumcision, and harm reduction (in particular the provision of clean injecting equipment and opioid substitution therapy[10]). Key strategies that focus on populations with known HIV infection include prevention of mother-to-child transmission (PMTCT) and 'prevention for positives'.[11] In health care settings, HIV transmission can be prevented through blood safety, injection safety, safe disposal of medical waste, and post-exposure prophylaxis.[12]

Such a 'combination prevention' approach has proved pivotal in the many national prevention successes that have been recorded, including in Brazil and Thailand. But often these prevention gains are fragile, and sustained support for comprehensive prevention efforts is required to ensure long-term success.

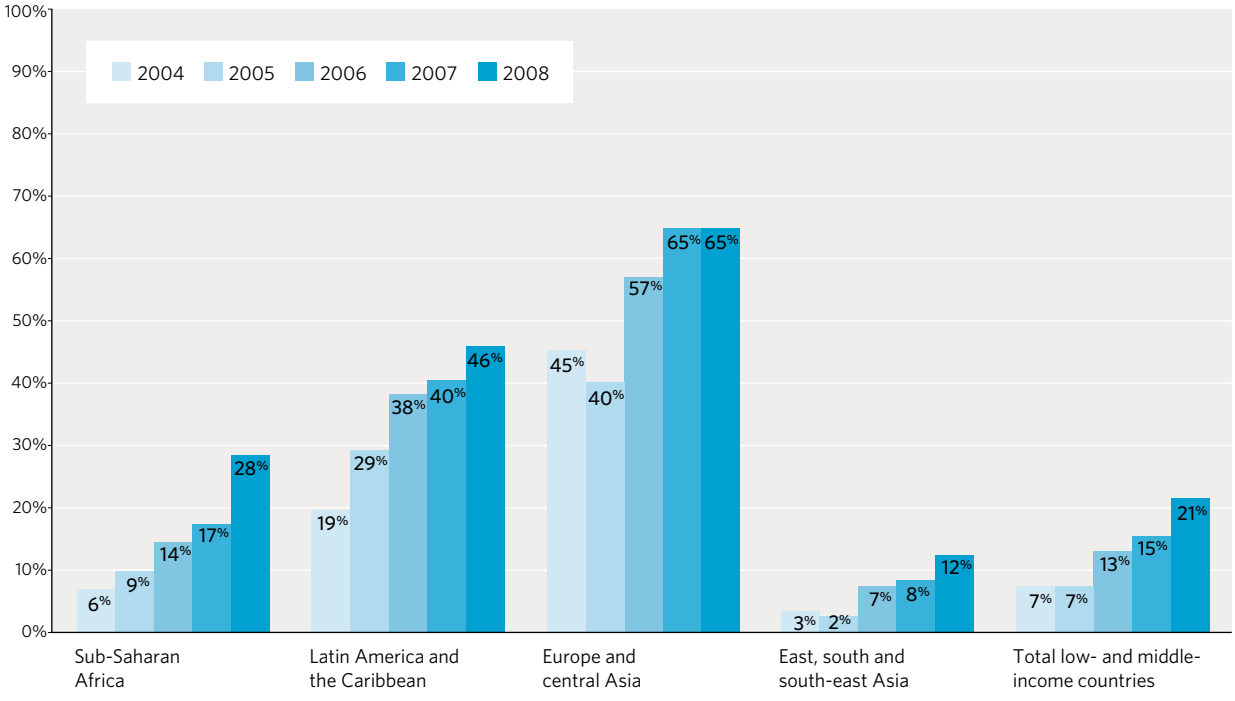
Preventing mother-to-child transmission

In high-income countries, HIV transmission from mother to child has been virtually eliminated through the implementation of a package of evidence-based services.[13] Yet even though the world possesses the tools to prevent mother-to-child transmission, progress has lagged in many resource-limited settings. In 2008, an estimated 430 000 children under the age of 15 became infected with HIV; the vast majority acquired HIV during pregnancy, delivery, or breastfeeding.

In collaboration with UNICEF and numerous other partners, WHO helps countries overcome barriers to the scale-up of PMTCT programmes. As co-chair of the Inter Agency Task Team on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants, WHO undertook a number of activities in the 2008–09 biennium, including four joint country missions to help review national PMTCT programmes, identify challenges and bottlenecks, and provide guidance on possible solutions.

With substantial funding from the Canadian International Development Agency (CIDA), WHO is providing intensive technical support to expand PMTCT services in nine countries of sub-Saharan Africa. WHO's new *PMTCT strategic vision*, developed in 2009, calls for accelerated support in 20 high-burden countries.[14]

Percentage of pregnant women who received an HIV test in low- and middle income countries by region, 2004–08



10 Opioid substitution therapy (OST) refers to the provision of daily doses of methadone or buprenorphine to counter drug users' withdrawal from heroine and street opiates. OST has proven to be effective in the treatment of opioid dependence as well as in the prevention of HIV transmission.

11 All people living with HIV should have access to a core set of health-sector interventions to prevent opportunistic infections, maximize their health, prevent further HIV transmission and, in some cases, delay the progression of HIV disease. Visit the following link for more information: http://www.who.int/hiv/pub/plhiv/interventions/en/

12 Post-exposure prophylaxis refers to the use of antiretroviral medicines to prevent transmission after potential HIV exposure in health-care settings or through sexual intercourse.

13 Key components of the comprehensive PMTCT package include primary HIV prevention for women, family planning services for women living with HIV, HIV testing in antenatal settings, timely administration of ARV drugs to mothers and newborns, safer delivery methods, counselling and support for optimal infant feeding practices, and care and treatment of the mother and her family.

14 *PMTCT strategic vision 2010-2015: preventing mother-to-child transmission of HIV to reach the UNGASS and Millennium Development Goals*. Geneva, World Health Organization, 2010.

Programmatic advances are saving lives: since 2001, at least 200 000 infections worldwide have been averted as a result of increased uptake of PMTCT services. In 2008, 45% of HIV-positive pregnant women in low- and middle-income countries received ARV drugs to prevent mother-to-child transmission, compared to 35% in 2007. However, that same year, only 21% of pregnant women giving birth in low- and middle-income countries received an HIV test.

In 2009, WHO revised its PMTCT, ART, and infant feeding recommendations to take account of emerging scientific evidence. These three sets of recommendations were updated through a coordinated mechanism, ensuring the harmonization of critical public health guidance. A broad range of stakeholders were consulted in the development of the guidelines, including civil society groups, academic institutions, and partners such as PEPFAR.

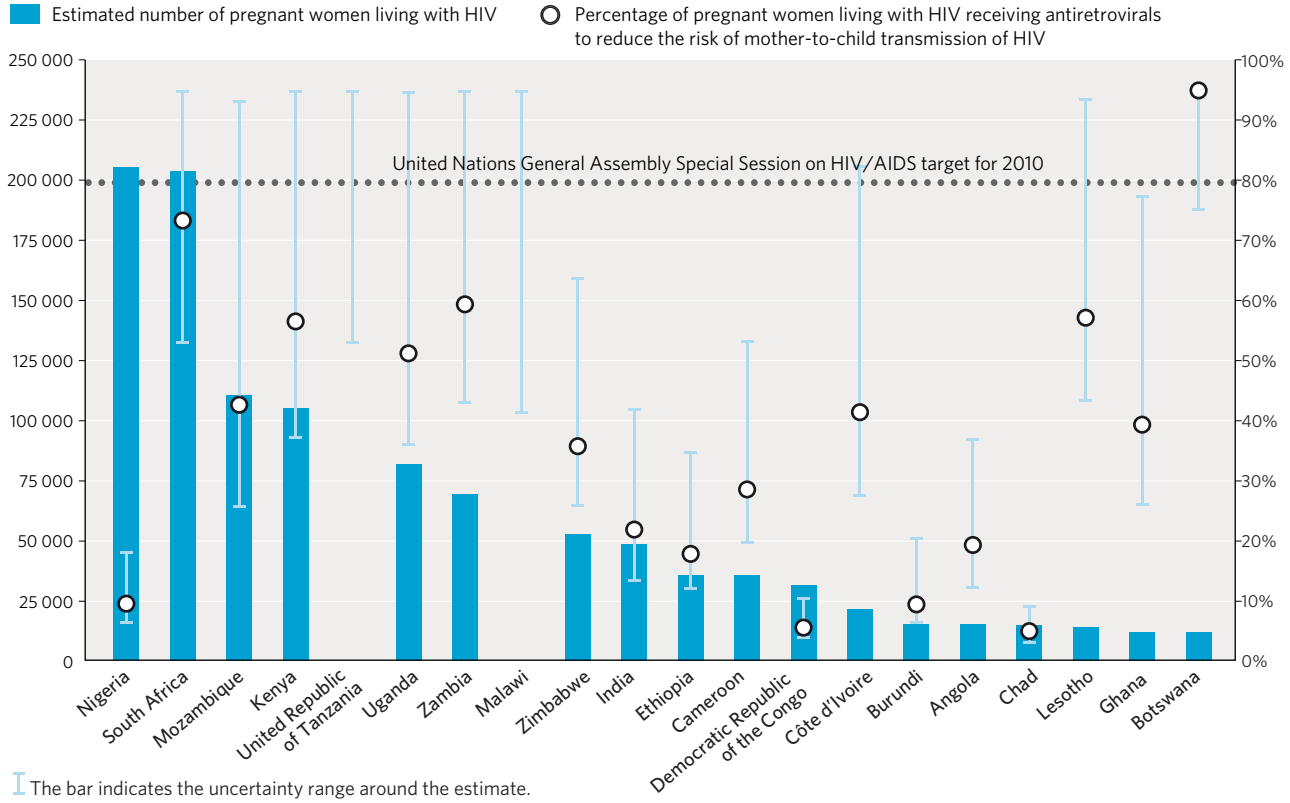
If widely adopted, the new WHO recommendations have the potential to eliminate mother-to-child transmission in low- and middle-income countries.[15] In collaboration with key partners, WHO will provide technical support to countries to adapt and implement the revised guidelines.

WHO's 2009 recommendations[16] for the prevention of mother-to-child transmission call for:

1. Earlier ART for HIV-positive pregnant women[17] to benefit both the health of the mother and prevent HIV transmission to her child during pregnancy.
2. Longer provision of ARV prophylaxis[18] for HIV-positive pregnant women who do not need ART for their own health. This would reduce the risk of HIV transmission from mother to child.
3. Provision of ARV drugs to the mother or child to reduce the risk of HIV transmission during the breastfeeding period. For the first time, there is enough evidence for WHO to recommend ARV drugs while breastfeeding.[19]

16 To access the recommendations, visit: http://www.who.int/hiv/pub/mtct/advice/en/
17 Lifelong ART is recommended for HIV-positive women with CD4 count of 350cells/mm^3 or less.
18 Antiretroviral prophylaxis refers to the short-term provision of ARVs to prevent HIV transmission from mother to child.
19 WHO now recommends that breastfeeding be maintained if the mother is taking ARV drugs.

Percentage of pregnant women living with HIV receiving ARVs to prevent mother-to-child transmission of HIV in 20 high- burden countries, 2008



15 Implementation of the new guidelines could reduce HIV transmission risk to less than 2% in non-breastfeeding populations and to less than 5% in breastfeeding populations.

Preventing transmission in key populations

Surveys in diverse regions have consistently found elevated HIV prevalence in key populations that are at heightened risk of HIV exposure and transmission. These include people who inject drugs, men who have sex with men, transgender individuals, sex workers and prisoners.

People who inject drugs

HIV transmission through injecting drug use is driving the epidemic in many parts of the world, especially in eastern Europe and central Asia. In collaboration with UNODC and UNAIDS, WHO produced a technical guide[20] in 2009 to help countries set ambitious targets for expanding HIV prevention and treatment services that support injecting drug users. An extensive consultation process, led by WHO's Regional Office in Europe, informed the development of this guide.[21] In the 2008–09 biennium, WHO and partners also issued technical guidance on the scale-up of needle and syringe programmes and on opioid substitution therapy.[22]

In Ukraine, which has the highest national HIV prevalence in Europe, WHO supported national efforts to examine and adopt opioid substitution therapy as a formal policy. The country's new National HIV/AIDS Plan for 2009–13 recognizes the importance of expanding prevention and treatment services to people who use drugs, adopting the target of 20 000 people receiving opioid substitution therapy by 2013. WHO has also played a key role in the establishment and scale-up of opioid substitution programmes in a number of countries in the Asia Pacific region, including Indonesia, Malaysia and Viet Nam.

Prisoners

WHO has played a critical role in providing guidance to policy-makers on the planning and implementation of evidence-based HIV programmes in prisons. WHO's *Evidence for action* series includes an array of policy guidance for prison-based HIV policies and programmes.[23] In 2009, WHO collaborated with UNODC and UNAIDS to produce a policy and technical brief on HIV testing and counselling in prisons and other closed settings.[24]

20 *Technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users*. Geneva, World Health Organization, 2009.

21 The framework and indicators proposed in the target-setting guide have already been adopted by several programmes in the region and by The Reference Group to the United Nations on HIV and Injecting Drug Use.

22 WHO's latest tools and guidelines on injecting drug use are available at the following link: http://www.who.int/hiv/topics/idu/en/

23 For more information on WHO's *Evidence for action* series, visit: http://www.who.int/hiv/pub/advocacy/idupolicybriefs/en/

24 To access these documents online, visit the following link: http://www.who.int/hiv/pub/idu/tc_prisons/en/

Of the estimated 16 million people who inject drugs globally, about 3 million are living with HIV. Explosive HIV epidemics occur in populations of injecting drug users where re-use and sharing of injecting equipment are common.

REDUCING DRUG-RELATED HARM

In the WHO Eastern Mediterranean Region, three WHO-supported Knowledge Hubs[25] are serving as vital resource centres on harm reduction for policy-makers, health providers, media professionals and civil society organizations. With continued financial support from the Drosos foundation, more than 3000 people have attended regional workshops, conferences and seminars focused on harm reduction since 2007. The Eastern Mediterranean Region is home to an estimated 1 000 000 injecting drug users and some 460 000 people living with HIV.

25 The three Knowledge Hubs, located in the Islamic Republic of Iran, Lebanon, and Morocco, constitute MENAHRA (Middle East and North Africa Harm Reduction Association), a network designed to link professionals working in the field of harm reduction. MENAHRA is supported by WHO and the International Harm Reduction Association.

EXPANDING CONDOM USE AMONG SEX WORKERS

In 2008, WHO collaborated with the government and other partners in Côte d'Ivoire to conduct a review of the national response to HIV among sex workers. Based on the assessment, WHO issued recommendations that helped guide the government of Côte d'Ivoire in its efforts to scale up a 100% condom programme, with free distribution of condoms and increased access to HIV testing, care and treatment services. Other countries in sub-Saharan Africa such as Kenya and Burkina Faso are following a similar approach to accelerate HIV prevention.

Antiretroviral treatment for HIV prevention

Evaluating the role of antiretroviral therapy for HIV prevention has emerged as a pressing scientific issue. ART lowers the concentration of HIV (also known as viral load) in the bloodstream and in genital secretions, thereby decreasing the risk of HIV transmission.

A modelling exercise authored by four WHO scientists,[26] published November 2008 in *The Lancet*, indicated that the wide-scale use of ART may have significant HIV prevention benefits at the population level. According to the model, which used data from several countries in southern Africa, universal voluntary HIV testing for all adults, on average once a year, followed by immediate ART after HIV diagnosis, would result in a 95% reduction in annual HIV incidence (rate of new HIV cases) within 10 years.

To review the evidence and explore the operational and ethical implications of using ART for prevention, WHO convened an expert consultation in November 2009. Meeting participants reaffirmed their commitment to achieving Universal Access to HIV treatment and prevention services, and agreed that ART has a major role to play in reducing HIV transmission.

Experts attending the consultation emphasized the imperative to ground future policies and practices in a human rights approach. It was agreed that no policy should be pursued that would result in coercion or otherwise exacerbate stigma or discrimination.

There was agreement that additional modelling work and limited field trials were merited. WHO committed to work with partners to develop guidance on how to take such research forward.

26 Granich RM, Gilks CF, Dye C, De Cock KM, Williams, BG. Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model. *The Lancet*, 26 November 2008.

Men who have sex with men and transgender individuals

In virtually every country where studies have been conducted, HIV prevalence among men who have sex with men (MSM) is markedly higher than in the general male population. Data show that HIV prevalence among transgender populations is even higher. In the 2008–09 biennium, WHO held global and regional consultations to address specific epidemiological, programmatic and human rights challenges related to the expansion of high-quality health services for these populations. Experts attending a 2009 consultation in Latin America and the Caribbean developed a set of tools[27] for clinicians and health administrators that will guide planning and implementation of MSM-related health care activities in the region. Globally, WHO continues to support efforts to scale up access, coverage and utilization of HIV services for MSM and transgender individuals.[28]

Sex workers

Though prevention coverage and reported condom use among sex workers in many countries has increased, the extreme vulnerability of sex workers[29] underscores the need for reinforced and expanded prevention focus on this population and their clients. In diverse regions, WHO supports implementation of a 100% condom approach[30] to prevent HIV transmission among sex workers and their clients. Drawing on nearly two decades of experience from HIV programmes in the South-East Asia and Western Pacific Regions, WHO produced a bi-regional toolkit[31] in 2009 focused on HIV services for sex workers. The toolkit is designed to help national project managers and health officials monitor and develop more effective programmes for this high-risk population.

Scaling up adult male circumcision

In 2007, three clinical trials in sub-Saharan Africa found that adult male circumcision reduces the risk of female-to-male sexual HIV transmission by approximately 60%. In response to these breakthrough findings, WHO has led efforts to assist countries in rolling out adult male circumcision programmes for HIV prevention.

With financial support from the Bill and Melinda Gates Foundation and PEPFAR, WHO has developed policy recommendations and toolkits to guide and accelerate programme implementation in 13 priority countries in sub-Saharan Africa.[32] In collaboration with UNAIDS and other partners, WHO has established a *Clearinghouse on Male Circumcision for HIV Prevention*,[33] providing web-based access to the broad range of tools required to plan and implement adult male circumcision programmes.

The 13 priority countries have rapidly used these tools to support the roll-out of male circumcision programmes. Situation analyses have been conducted or are under way in all of these countries, and formal national guidelines have either been implemented or drafted in several countries.

Expanding comprehensive HIV services for men who have sex with men is a major focus of WHO's work in HIV/AIDS.

With technical support and guidance from WHO, Kenya, for example, has formally integrated adult male circumcision into its National AIDS Strategic Plan, which aims to cut the rate of new HIV infections in half by 2013. Kenya's plan calls for the performance of 150 000 male circumcisions per year over five years. Quality assurance visits conducted in 2009 by the Kenya Ministry of Health and national partners concluded that most male circumcisions performed under the new strategy adhered to WHO quality standards.

27 *Blueprint for the provision of comprehensive care to gay men and other men who have sex with men in Latin American and the Caribbean.* Pan American Health Organization, 2009.

28 These services include the provision of condoms and lubricants, management of sexually transmitted infections, HIV testing and counselling and antiretroviral treatment.

29 In 2008, the median HIV prevalence among sex workers in selected sites in 13 sub-Saharan African countries was 20%.

30 The 100% condom approach aims to reduce sexual transmission of HIV and STIs by assuring that condoms are used: 100% of the time in sex-work settings; in 100% of risky sexual relations; and in 100% of sex entertainment establishments.

31 *Toolkit for monitoring and evaluation of interventions for sex workers.* New Delhi, World Health Organization, 2009.

32 WHO's latest tools and guidelines on male circumcision can be found here: http://www.who.int/hiv/topics/malecircumcision/en/index.html

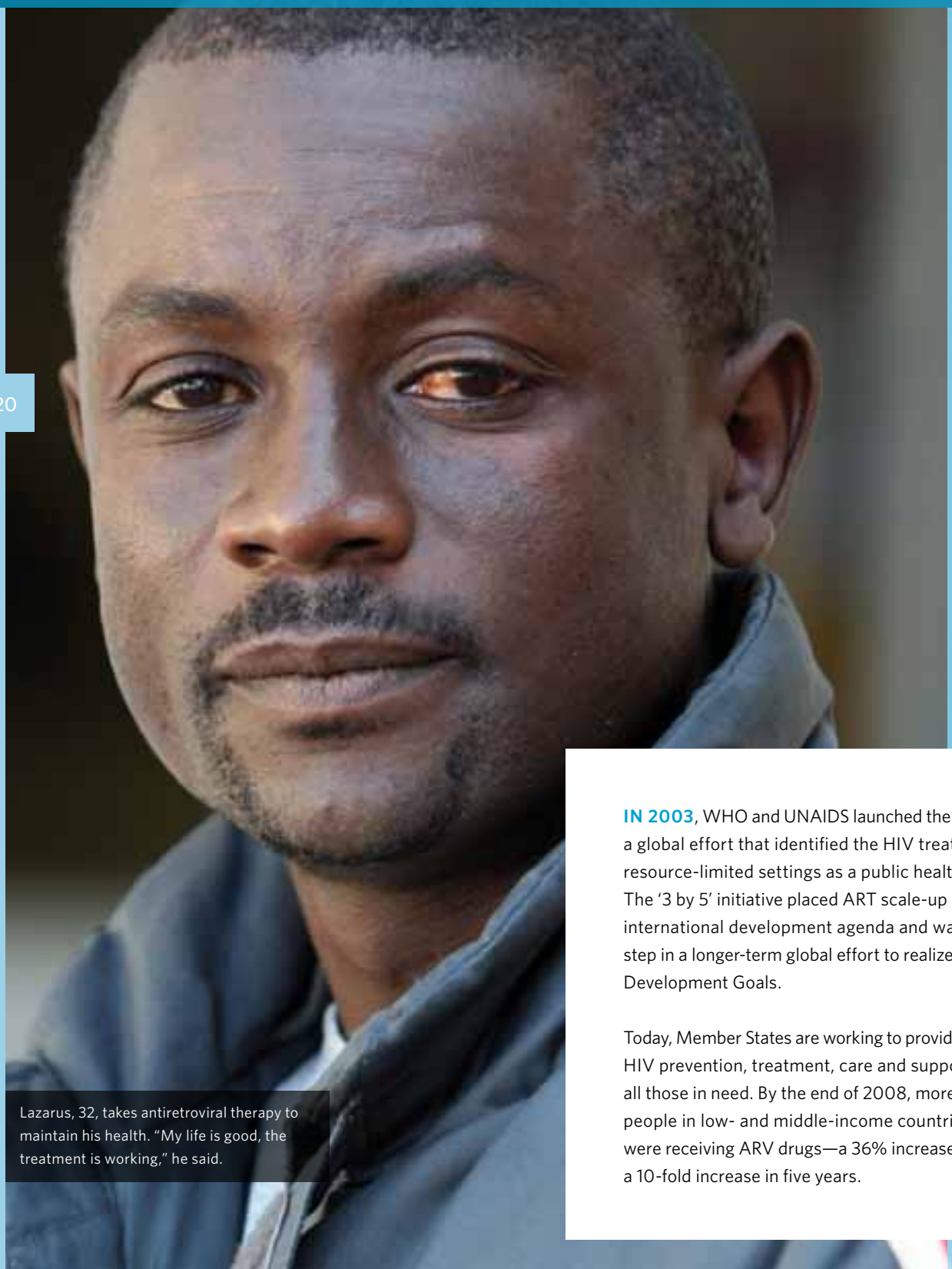
33 To access the Clearinghouse on Male Circumcision, visit: http://www.malecircumcision.org/

Drug users often live on the margins of society, out of touch with health and social services. In eastern Europe, this isolation is fuelling severe epidemics of HIV. In 2007, contaminated needles, syringes and other injecting equipment were the source of 57% of newly diagnosed cases of HIV infection in the eastern European region.

In Vilnius, Lithuania's capital city, a 'blue bus' run by social workers provides sterile needles, syringes and alcohol swabs to injecting drug users, five days a week. Evidence shows that such needle-syringe programmes significantly reduce transmission of HIV and allow for referral to drug treatment and other health care services.

STRATEGIC DIRECTION 3

Accelerating HIV/AIDS treatment and care



Lazarus, 32, takes antiretroviral therapy to maintain his health. "My life is good, the treatment is working," he said.

IN 2003, WHO and UNAIDS launched the '3 by 5' initiative, a global effort that identified the HIV treatment gap in resource-limited settings as a public health emergency. The '3 by 5' initiative placed ART scale-up squarely on the international development agenda and was an important step in a longer-term global effort to realize the Millennium Development Goals.

Today, Member States are working to provide comprehensive HIV prevention, treatment, care and support services to all those in need. By the end of 2008, more than 4 million people in low- and middle-income countries worldwide were receiving ARV drugs—a 36% increase over 2007 and a 10-fold increase in five years.

The vast majority (98%) of people taking ART in high-burden countries are receiving first-line drugs in accordance with WHO recommendations. Increasingly, however, WHO is responding to national requests for assistance in planning for the second- and third-line regimens that will be needed by a growing number of patients in coming years.

Updating treatment guidance

On the basis of a thorough review of emerging evidence, and in consultation with a wide range of stakeholders, WHO revised its ART recommendations for adults and adolescents in 2009.

Key recommendations include:[34]

1. Earlier diagnosis and treatment of HIV in the interest of a prolonged and healthier life.
2. Greater use of safer treatment regimens that are more easily tolerated.
3. Expanded laboratory testing to improve the quality of HIV treatment and care.[35]

34 To access these recommendations, visit: http://www.who.int/hiv/pub/arv/advice/en/index.html

35 Access to laboratory tests should not be a prerequisite for treatment under WHO guidelines.

The widespread implementation of the new ART recommendations is expected to reduce HIV and TB transmission, improve quality of care for all patients, including those with viral hepatitis, and help HIV-positive people live longer and healthier lives.

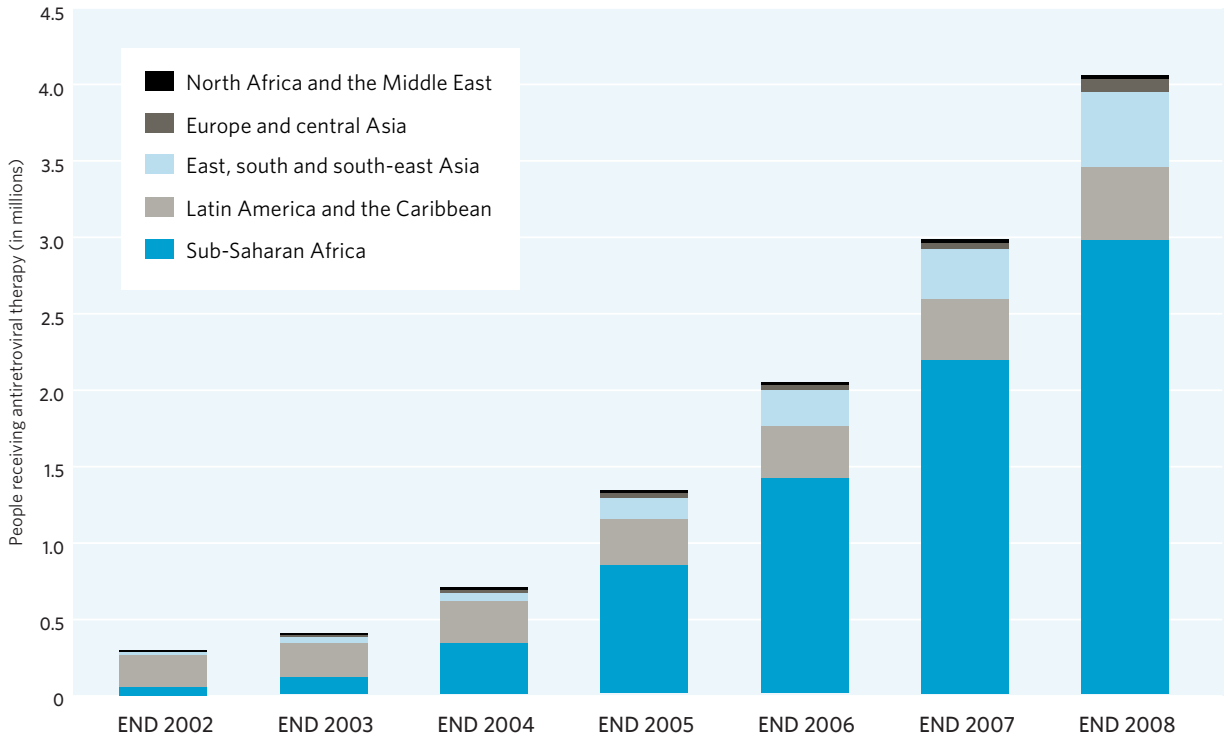
WHO, in collaboration with key partners, will provide technical support to the highest-burden countries to adapt and implement the revised policy guidance. In 2010, WHO will review and update treatment guidance for key opportunistic infections and HIV-related cancers, as well as viral hepatitis.

Expediting scale-up of antiretroviral treatment

The availability of effective HIV medicines in developing countries is undermined by several factors, including the high cost of drugs, poor supply and distribution systems, insufficient health facilities and staff, and intellectual property barriers impeding access to effective drugs. WHO works to remove barriers to the scale-up of effective HIV drugs, as described in sections 3 and 4 of this report.

The WHO Prequalification Programme facilitates access to HIV and other medicines that meet unified standards of quality, safety and efficacy. The Programme develops a list of prequalified medicinal products which is used by UN agencies, the Global Fund, and countries themselves to guide their procurement and programmatic decisions. WHO also helps countries build national regulatory capacity through networking, training and information sharing.[36]

Number of people receiving antiretroviral therapy in low- and middle-income countries, 2002–08



36 Countries with limited resources frequently look to WHO decisions on prequalification and on the Essential Medicines List (EML) to determine which compounds should be licensed for use. Most countries refer to EML to develop their own national lists.

While the Prequalification Programme is primarily intended for use by UN and other multilateral partners in making procurement decisions, WHO's Essential Medicines List (EML) is specifically designed to help governments select medicines that address local public health needs. WHO has introduced several new HIV medicines on the EML in the last two years, including fixed dose combination ARVs. Since its conception, the EML has proved to be a powerful tool for the promotion of primary health care.

To overcome barriers to treatment scale-up, WHO has also worked with countries in sub-Saharan Africa to strengthen their procurement and supply management systems, using 12 core indicators to assess national systems.

Expanding HIV treatment for children

Increasing children's access to treatment and care is a WHO priority. Over the past two years, WHO has identified new paediatric antiretroviral formulations and, together with partners, provided guidance to low- and middle-income countries on the scale-up of paediatric ART programmes.[37] More children are now benefiting from such programmes: the number of children under 15 in low- and middle-income countries who received ART rose from 198 000 in 2007 to 275 700 in 2008, representing a coverage rate of 38%.

37 Key guidance includes a programming framework developed with UNICEF to support the scale-up of paediatric HIV treatment, a summary of simplified dosing regimens for infants and children, and revised treatment guidelines for infants.

Improving adherence to treatment

The effectiveness of treatment programmes, particularly in low- and middle-income countries, is enhanced by minimizing problems related to toxicity, intolerance, and drug-drug interactions. As a greater number of people access treatment, WHO is intensifying its efforts to support pharmacovigilance[38] activities in countries and build their capacity to track and analyze adverse drug effects.[39]

In 2009, WHO launched a pharmacovigilance project funded by the Bill and Melinda Gates Foundation. Pharmacovigilance programmes and networks were evaluated in six selected countries, and pharmacovigilance training was rolled out in eight African countries. The creation of an online, global data base on antiretroviral toxicities has generated comprehensive information on adverse effects associated with ARV medicines.

Countries are using the strategic information on adverse ARV drug effects to develop national policies that aim to maximize patient adherence to HIV treatment and the effectiveness of treatment regimes.

Preventing and managing tuberculosis

Tuberculosis (TB) is a leading cause of death among people living with HIV. In 2008, an estimated 1.4 million people were co-infected with HIV and TB; that same year, 500 000 people died from HIV-related causes.

Globally, 1.4 million TB patients were tested for HIV in 2008, up from 1.2 million in 2007. Of those who tested HIV-positive, just one-third benefited from life-prolonging antiretroviral therapy.

To help close persistent gaps in access to care and treatment for people living with HIV/TB co-infection, WHO is placing increasing emphasis on the **Three 'I's**, a strategy that calls for **I**ntensified TB case-finding, **I**soniazid preventive therapy in HIV care settings, and TB **I**nfection Control to prevent further TB transmission.[40] Countries are also being supported to integrate HIV testing, treatment and care into TB services.

Only through combined and coordinated efforts for both HIV and TB can this dual epidemic be halted. A growing number of countries are benefiting from WHO technical support and are adopting WHO recommendations for collaboration between HIV and TB programmes. In partnership with PEPFAR and UNAIDS, WHO published guidelines in 2009 for the monitoring and evaluation of collaborative HIV/TB activities.

38 Pharmacovigilance is the pharmacological science relating to the detection, assessment, understanding and prevention of adverse drug effects, particularly long-term and short-term side-effects of medicines.

39 In medicine, an adverse drug effect is a harmful and undesired effect resulting from a medication or other intervention such as surgery. Adverse effects may lead to non-compliance with a treatment regimen.

40 For more on the Three 'I's strategy and other TB-related guidance, visit: http://www.who.int/hiv/topics/tb/en/index.html

STRENGTHENING HEALTH SERVICES AND EXPANDING TREATMENT IN PAPUA NEW GUINEA

WHO's multi-faceted support is reflected in the experience of Papua New Guinea, which has a generalized epidemic. Beginning with pilot treatment projects undertaken in collaboration with WHO, the Australian Agency for International Development (AusAID), and the Asian Development Bank, Papua New Guinea began scaling up antiretroviral therapy in 2004, with financial support from the Global Fund. WHO and other development partners reviewed national treatment guidelines. From the initial two pilot projects, the number of treatment sites had increased to 52 by the end of 2008, with 5195 people receiving ART. More than 275 health workers across the country have been trained in service delivery through a nationally-adapted version of WHO's IMAI package.

TREATMENT SCALE-UP IN NAMIBIA

Since 2003, WHO has supported Namibia in its successful efforts to scale up antiretroviral treatment for those in need. Namibia has one of the highest HIV prevalence rates in the world, with an estimated 15.3% of the adult population affected. By the end of 2008, some 59 000 people in Namibia were receiving ART, representing a coverage rate of more than 90%.

With technical support from WHO, Namibia has established ART services in all 34 district hospitals in the country. Together with national health authorities and partners, WHO recently supported the development of Namibia's first HIV drug resistance strategy, including a monitoring tool to track treatment adherence, drug stock-outs and drop-out rates for patients receiving ART

Estimated number of people receiving and needing antiretroviral therapy (ART) and coverage percentage in low- and middle-income countries by region, as of December 2008 and December 2007*

	2008			2007		
Region	Receiving ART, 2008 [range]	Needing ART, 2008 [range]*	ART coverage, 2008 [range]	Receiving ART, 2007 [range]	Needing ART, 2007 [range]*	ART coverage, 2007 [range]
Sub-Saharan Africa	2 925 000 [2 690 000-3 160 000]	6 700 000 [6 100 000-7 100 000]	44% [41-48%]	2 100 000 [1 905 000-2 295 000]	6 400 000 [5 900 000-7 000 000]	33% [30-36%]
Eastern and southern Africa	2 395 000 [2 205 000-2 585 000]	5 000 000 [4 500 000-5 300 000]	48% [45-53%]	1 680 000 [1 550 000-1 810 000]	4 700 000 [1 550 000-1 810 000]	36% [33-39%]
Western and central Africa	530 000 [485 000-575 000]	1 800 000 [1 500 000-1 900 000]	30% [28-34%]	420 000 [360 000-480 000]	1 700 000 [1 500 000-1 900 000]	25% [22-28%]
Latin America and the Caribbean	445 000 [405 000-485 000]	820 000 [750 000-870 000]	54% [51-60%]	390 000 [350 000-430 000]	770 000 [700 000-820 000]	50% [47-55%]
Latin America	405 000 [370 000-440 000]	740 000 [680 000-790 000]	55% [52-60%]	360 000 [320 000-400 000]	700 000 [640 000-750 000]	51% [47-56%]
Caribbean	40 000 [35 000-45 000]	75 000 [66 000-83 000]	51% [46-59%]	30 000 [25 000-35 000]	70 000 [61 000-80 000]	43% [37-49%]
East, south and south-east Asia	565 000 [520 000-610 000]	1 500 000 [1 200 000-1 900 000]	37% [31-47%]	420 000 [375 000-465 000]	1 500 000 [1 100 000-1 800 000]	29% [23-37%]
Europe and central Asia	85 000 [80 000-90 000]	370 000 [310 000-450 000]	23% [19-27%]	54 000 [51 000-57 000]	340 000 [280 000-410 000]	16% [13-19%]
North Africa and the Middle East	10 000 [9 000-11 000]	68 000 [52 000-90 000]	14% [11-19%]	7 000 [6 000-8 000]	63 000 [48 000-86 000]	11% [8-14%]
Total	4 030 000 [3 700 000-4 360 000]	9 500 000 [8 600 000-10 000 000]	42% [40-47%]	2 970 000 [2 680 000-3 260 000]	9 000 000 [8 200 000-9 900 000]	33% [30-36%]

* Note: some numbers do not add up due to rounding.

STRATEGIC DIRECTION 4

Strengthening and expanding health systems

In many resource-limited countries, a shortage of trained health care workers has impeded the scale-up of HIV services.

STAKEHOLDERS IN THE HIV FIELD are among the most powerful advocates for health systems strengthening. In working to expand prevention and treatment services in resource-limited settings, the HIV response has highlighted the myriad ways that weak health systems inhibit accelerated progress.

Recent years have witnessed the emergence of an often-polemical debate on the relative value of disease-specific initiatives as opposed to broader efforts to buttress health systems. WHO's experience indicates that this is a false dichotomy. At the 62nd World Health Assembly in 2009, Member States affirmed the interdependence of strengthening health systems, primary health care and disease-specific programmes. Through careful planning and service integration, it is possible both to accelerate the response to HIV and to strengthen fragile health systems for the benefit of all patients.

Mobilizing resources for health

Evidence suggests that the increased attention to health issues generated by the HIV response has helped drive a broader increase in health spending. As HIV scale-up accelerated in the first half of this decade, overall development assistance for health grew from US $6 billion in 2000 to US $22 billion in 2007, with HIV/AIDS, sexually transmitted infections, and reproductive health accounting for an estimated 42% of the total amount spent in 2007.[41]

Despite this encouraging trend, considerable resource gaps for HIV and other health issues persist in low- and middle-income countries. Recent signs suggest that these shortfalls may be widening as a result of the ongoing economic downturn. By mobilizing financial resources for HIV programmes and the health systems that implement the response to HIV, WHO not only accelerates the HIV response but also helps countries meet financial goals for broader health services.

In 2008, WHO helped 50 countries develop funding proposals to the Global Fund. In Rounds 7 and 8 of the Global Fund, the success rate for HIV-related country proposals developed with assistance from WHO increased from 41% to 49%, respectively. WHO also played an instrumental role in establishing the '70% coalition', a grouping of key partners that aims to raise the success rate for HIV proposals to at least 70%.

Strengthening planning and management

Sound strategic plans are critical to secure funding and achieve desired HIV prevention and treatment outcomes. In the 2008-09 biennium, WHO developed new guidance to help countries review strategic plans and manage their health-sector response to HIV. The guidance aims to ensure that HIV plans are integrated within broader health strategies. Additionally, WHO trained Ministry of Health staff from Africa, Asia and the eastern Mediterranean in programme management and strategic planning.

In 2009, WHO developed a new tool to cost Global Fund HIV proposals. WHO plays a key role in ensuring that costed health-sector activities are incorporated into multisectoral national HIV plans.

In collaboration with the International Health Partnership and related initiatives (IHP+), the Global Fund, UNAIDS and the World Bank, WHO is working to improve the quality of national plans for the heath sector response to HIV.

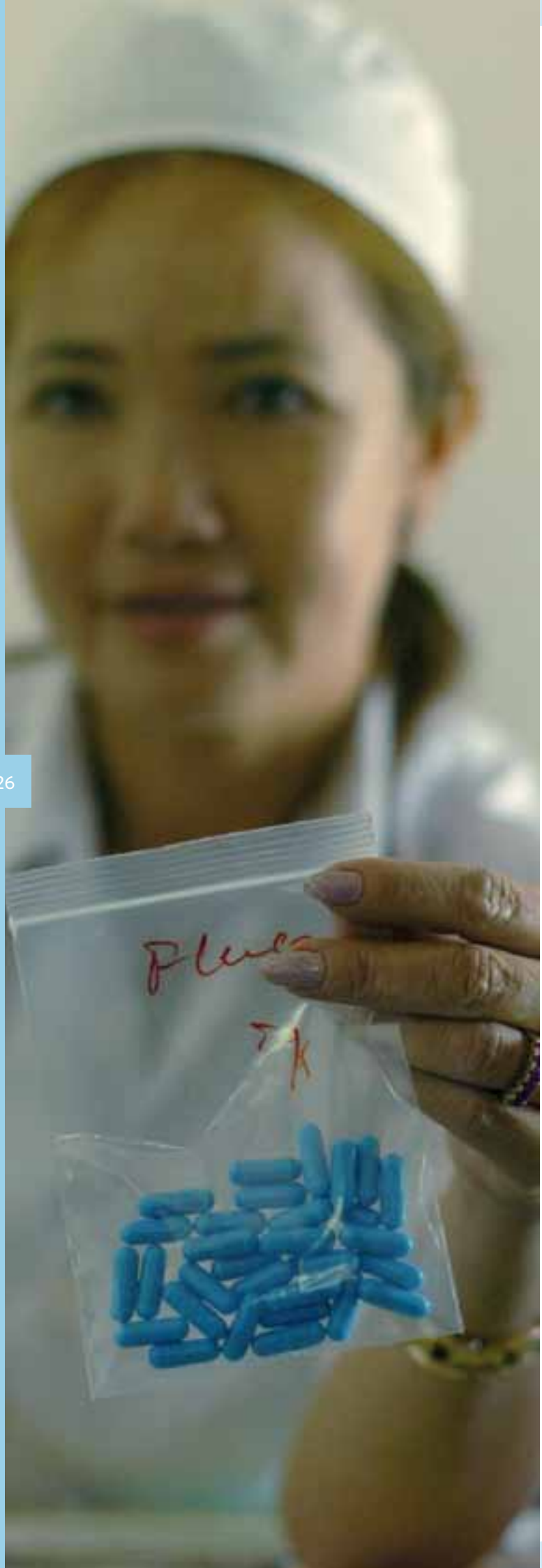
Expanding human resources

WHO estimates that the global shortage of trained health-care workers exceeds 4 million. In Africa, an additional 1.5 million trained workers are needed to address the current shortfall in health systems according to the Global Health Workforce Alliance.

An important element of WHO's strategy to increase the capacity of the health work force is 'task shifting.' WHO launched task-shifting guidelines in 2008 to help countries strengthen their health systems and expand access to HIV treatment and care.[42] Under this approach, specific tasks associated with health care delivery are delegated, where appropriate, from highly qualified health workers to other health and community workers. According to reports in 2008 from 93 countries, more than half (53%) had developed policies to address human resource shortages through task-shifting strategies. In sub-Saharan Africa, 63% of reporting countries had such a strategy in place in 2008.

41 J. Kates, E. Lief, J. Pearson *Donor funding for health in low- and middle-income countries, 2001-2007.* Henry J Kaiser Family Foundation, Menlo Park, CA (USA), 2009.

42 To access WHO's task shifting guidelines, visit: http://www.who.int/healthsystems/task_shifting/en/



WHO provides focused technical support to help country partners translate guidance on human resources into effective policy and programmes. In south-east Asia, for example, WHO sponsored a six-country workshop in 2008 on HIV-related human resource planning, providing guidelines, tools and training curricula for nurses and midwives.

Promoting service integration

WHO promotes the provision of integrated, primary health care services at the community, health centre and district hospital levels. The WHO IMAI (Integrated Management of Adolescent and Adult Illness) and IMCI (Integrated Management of Childhood Illness) tools are critical vehicles for scaling up comprehensive prevention, treatment and care for people living with HIV in resource-limited settings.

The IMAI tools provide clear guidance on the management of HIV in resource-limited settings. They also address a host of non-HIV-specific health services required in the management of HIV, such as TB treatment, family planning, mental health, palliative care, and maternal and child health services.

By placing emphasis on the provision of integrated primary care where people live, the IMAI tools contribute to improved patient referral and case management, health services that are more responsive to the needs of the patient, and better communication between levels of the health system.

IMCI has been implemented in more than 100 countries. IMAI is used in 41 countries, most with a high HIV burden. WHO also supports a train-the-trainer approach that expands capacity of clinical teams to manage HIV.

Patient monitoring

Adequate patient monitoring[43] systems are critical to ensure the long-term sustainability of antiretroviral therapy programmes. Together with the United States Centers for Disease Control and Prevention (CDC), UNAIDS, UNICEF, and other partners, WHO is promoting interlinked patient monitoring systems for HIV, TB, PMTCT and maternal and child health.

Based on a wealth of experience accumulated in Ethiopia, Guyana and India, WHO recently published a compilation of best practices and lessons learned to guide programme managers implementing patient monitoring systems in resource-limited settings.[44]

43 Patient monitoring is the routine collection, compilation and analysis of patient data over time and across service delivery points.

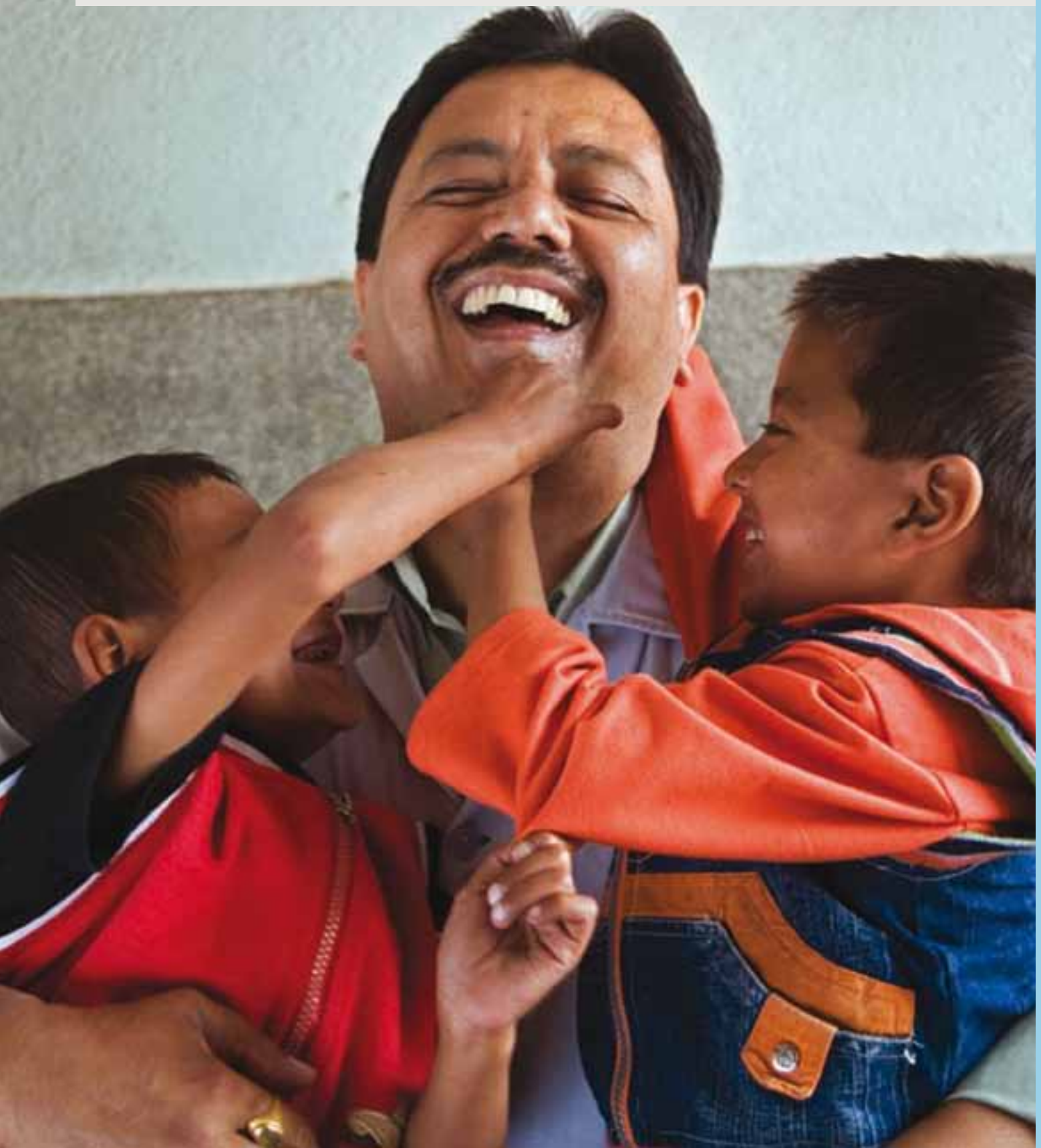
44 *Country experiences in implementing patient monitoring systems for HIV care and antiretroviral therapy in Ethiopia, Guyana and India: an overview of best practices and lessons learned.* Geneva, World Health Organization, 2010.

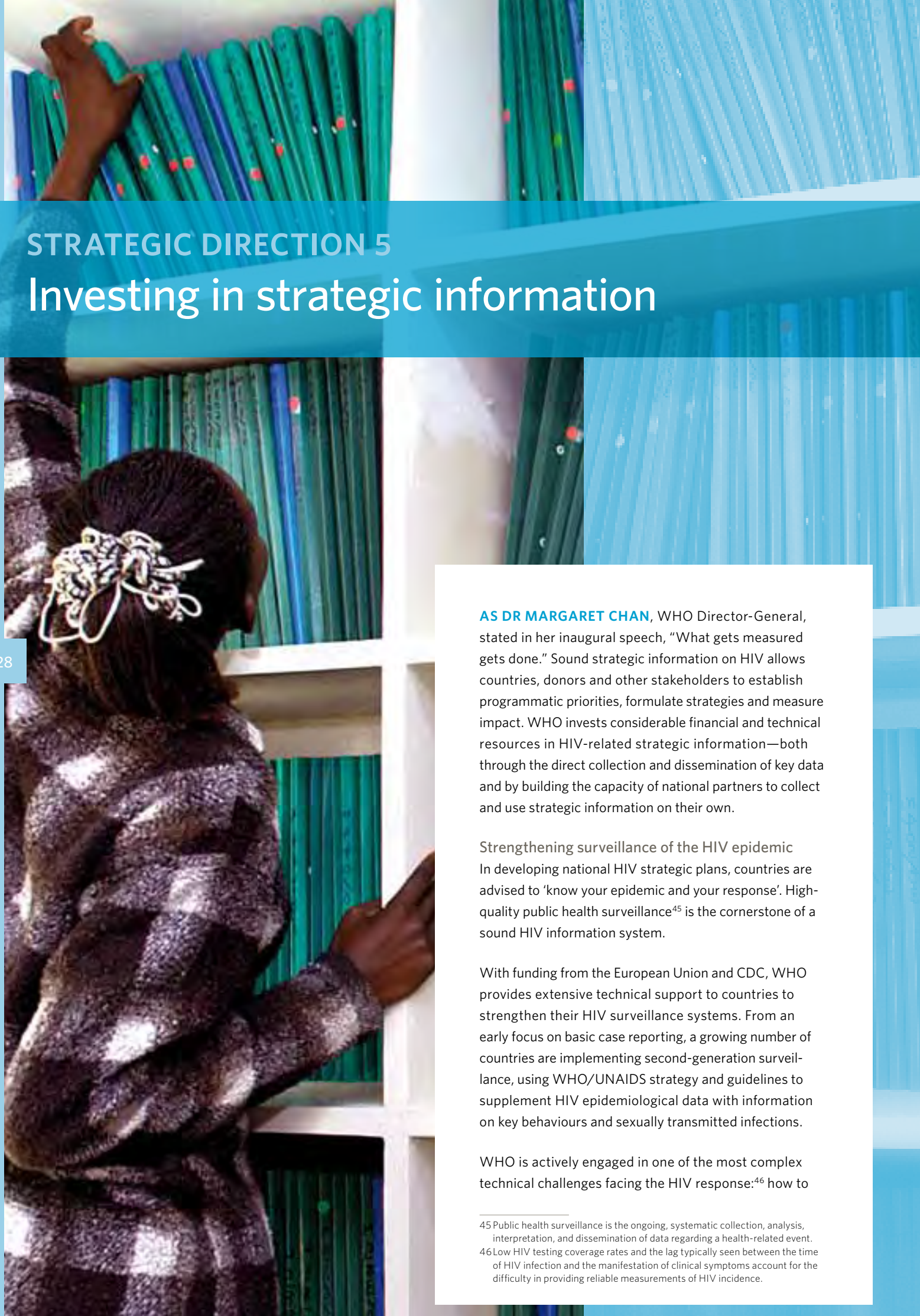
THE POWER OF PARTNERSHIP

An estimated 115 000 children are living with HIV in India. With support from WHO, the Indian Academy of Paediatricians, the Clinton Foundation, UNITAID and UNICEF, India launched the *Paediatric AIDS Initiative* in December 2006 to accelerate access to treatment for children.

Under the leadership of the National AIDS Control Organization, WHO assisted India in the development of clinical management guidelines, tools for simplified paediatric dosing, and innovative training modules for child counsellors; the Clinton Foundation and UNITAID supported the procurement and supply of generically-manufactured fixed-dose combination paediatric drugs to health facilities; and UNICEF supported mass campaigns to encourage non governmental organizations to bring HIV-infected children into the programme.

Partnership was critical to India's success in scaling up paediatric treatment: in September 2009, nearly 60 000 HIV-infected children were registered with India's national paediatric ART programme, up from 6 000 children in 2006.





STRATEGIC DIRECTION 5

Investing in strategic information

AS DR MARGARET CHAN, WHO Director-General, stated in her inaugural speech, "What gets measured gets done." Sound strategic information on HIV allows countries, donors and other stakeholders to establish programmatic priorities, formulate strategies and measure impact. WHO invests considerable financial and technical resources in HIV-related strategic information—both through the direct collection and dissemination of key data and by building the capacity of national partners to collect and use strategic information on their own.

Strengthening surveillance of the HIV epidemic

In developing national HIV strategic plans, countries are advised to 'know your epidemic and your response'. High-quality public health surveillance[45] is the cornerstone of a sound HIV information system.

With funding from the European Union and CDC, WHO provides extensive technical support to countries to strengthen their HIV surveillance systems. From an early focus on basic case reporting, a growing number of countries are implementing second-generation surveillance, using WHO/UNAIDS strategy and guidelines to supplement HIV epidemiological data with information on key behaviours and sexually transmitted infections.

WHO is actively engaged in one of the most complex technical challenges facing the HIV response:[46] how to

45 Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event.

46 Low HIV testing coverage rates and the lag typically seen between the time of HIV infection and the manifestation of clinical symptoms account for the difficulty in providing reliable measurements of HIV incidence.

reliably measure HIV incidence, or the number of new HIV infections in a population within a specified period of time. WHO has established a Technical HIV Incidence Assay Working Group (HIVIWG) to provide technical guidance and to advance efforts in this area of work.

To support strategic action to reduce HIV risk among key populations (including sex workers, men who have sex with men, transgender individuals, injecting drug users), WHO helps countries estimate the size and distribution of these groups. In 2009, for example, WHO regional staff sponsored training initiatives on estimating the size of key populations in the South-East Asia and Eastern Mediterranean Regions.

In collaboration with the UNAIDS Secretariat, WHO regularly publishes reports on global and regional epidemiological trends (including the latest *AIDS epidemic update* in November 2009). With support from WHO, national epidemiological estimates are provided every other year.

Monitoring coverage and impact of interventions

WHO takes the lead in monitoring and evaluating the health-sector response to HIV. In collaboration with partners, WHO helps countries generate quality data, monitor progress against relevant indicators, and use data to improve the health-sector response to HIV.

For example, a WHO training guide[47] on data triangulation, developed in 2009, helps countries analyse data from multiple sources. This information is then used to assess the impact of HIV scale-up on mortality and the epidemic.

Each year, WHO collaborates with UNAIDS and UNICEF to publish *Towards universal access*,[48] the definitive global and regional reference for the health sector response to HIV. As a key area of work, WHO measures progress in the availability, coverage and impact of priority HIV interventions, including HIV testing and counselling, antiretroviral therapy, and services to prevent mother-to-child HIV transmission. In 2009, 158 of 193 UN Member States reported national data to WHO, including 139 low- and middle-income countries.

These annual progress reports demonstrate the value of investments in HIV programmes and provide strategic information to promote accountability in the HIV response. They also identify gaps and problematic patterns, allowing countries, regional bodies, donors, international technical agencies and other stakeholders to take strategic and informed action.

47 *HIV triangulation resource guide: synthesis of results from multiple data sources for evaluation and decision making*. Geneva, World Health Organization, 2009.

48 To download the 2009 *Towards universal access* report, visit: http://www.who.int/hiv/pub/tuapr_2009_en.pdf

Ensuring transparency and efficiency

Strategic information generated by WHO helps countries maximize the impact of limited health budgets. The WHO AIDS Medicines and Diagnostic Service (AMDS)[49] helps countries manage their supplies of antiretroviral medicines and broker partnerships among technical and funding agencies, manufacturing companies, and other organizations.

A key component of AMDS is the Global Price Reporting Mechanism (GPRM), the world's most comprehensive procurement database covering some 80% of the antiretroviral market. This database has been expanded to include information on tuberculosis and malaria drugs as well as other HIV-related medicines (eg. for opioid substitution therapy), diagnostics and commodities. GPRM is a web-based network that provides transaction prices for drugs purchased in 106 low- and middle-income countries. It serves as a price monitoring tool[50] that helps countries negotiate the best prices for quality-assured drugs and diagnostics.

Capitalizing on GPRM and annual surveys of ARV use, WHO produces forecasts on ARV drug demand. These forecasts, in turn, inform ARV drug production to avoid global shortages. WHO also helps countries minimize the risks of drug stock-outs and overstocks through the use of early warning indicators and Coordinated Procurement Planning (CPP), a collaborative initiative aimed at strengthening national procurement systems.

Monitoring drug resistance

WHO is leading global efforts to assess and minimize the emergence of HIV drug resistance (HIVDR),[51] with the overall goal of promoting the long-term effectiveness of available first- and second-line regimens.

WHO technical experts collaborate with national working groups to improve HIVDR policies and practices. As of November 2009, WHO had trained Ministry of Health staff in more than 60 countries to develop and implement national HIVDR prevention strategies. By the end of 2009, 45 countries were monitoring early warning indicators[52] of HIV drug resistance and using the strategic information gathered to guide national policies on HIV treatment. Additionally, 20 countries were evaluating transmitted resistance[53] and 12 countries were monitoring HIVDR emergence.

49 For more information on AMDS, visit: http://www.who.int/hiv/amds/

50 GPRM reported that prices of most first-line regimens in low- and middle-income countries fell by 10 to 40% between 2006 and 2008.

51 HIV drug resistance refers to the ability of HIV to continue replicating in the presence of a drug that usually suppresses its replication.

52 HIVDR early warning indicators, as monitored at sentinel ART sites, are potentially associated with HIVDR emergence. Early warning indicators include ARV prescribing practices, patient retention on first-line treatment, drug stock-out rates, and treatment adherence.

53 This surveillance classifies the prevalence of transmitted HIVDR in a specific geographic area into one of three categories: low (<5%), moderate (5–15%) and high (>15%).

PREVENTING ARV DRUG STOCK OUTS IN ETHIOPIA

The Coordinated Procurement Planning (CPP) initiative, which includes WHO/AMDS as a steering committee member, has been effective in preventing drug stock-outs in a number of countries. In Ethiopia, for example, the CPP initiative supported national forecasting efforts and supply plan management, resulting in the elimination of ARV stock-outs at the national level. In 2008, none of the 420 health facilities dispensing ARVs in Ethiopia reported a stock-out of a required antiretroviral drug. Notably, the CPP initiative also led to a general improvement in Ethiopia's supply system for other essential medicines.

As a key contribution to the global response, WHO created HIVResNet, an international group of experts, laboratories and organizations that develops methods and provides support for HIVDR prevention, surveillance and monitoring. By the end of 2009, WHO and HIVResNet had accredited 24 laboratories for HIVDR genotyping[54] and were working towards accreditation of an additional 29 laboratories; they had also carried out critical operational research to facilitate the roll-out of an HIVDR prevention and assessment strategy in remote areas.

Building the evidence base

WHO plays a leading role in articulating the global HIV research agenda. In 2009, WHO led a consensus meeting to set research priorities relating to the scale-up of ART programmes; meeting participants identified bottlenecks to expanding such programmes and related research priorities. With a number of clinical trials under way to evaluate the efficacy of pre-exposure prophylaxis (PrEP),[55] WHO convened an expert consultation in 2009 to examine research and implementation issues associated with this potential new HIV prevention strategy.

WHO also plays a key role in facilitating operational research. In 2009, for example, WHO published a set of generic tools[56] to guide HIV-related operational research in four areas: HIV testing and counselling, stigma and discrimination, adherence to antiretroviral therapy, and HIV prevention in the context of scaled-up ART. The toolkit proposes data collection instruments for use in health facilities that can help generate comparable information across settings.

WHO is involved in the coordination of major research proposals, such as MATCH, a four-country study funded by the US National Institutes of Health, designed to compare diverse modes of HIV testing and counselling. Results from Kesho Bora, a WHO-led multi-country study in Africa, found that a new drug combination dramatically reduces mother-to-child transmission of HIV during breastfeeding.[57]

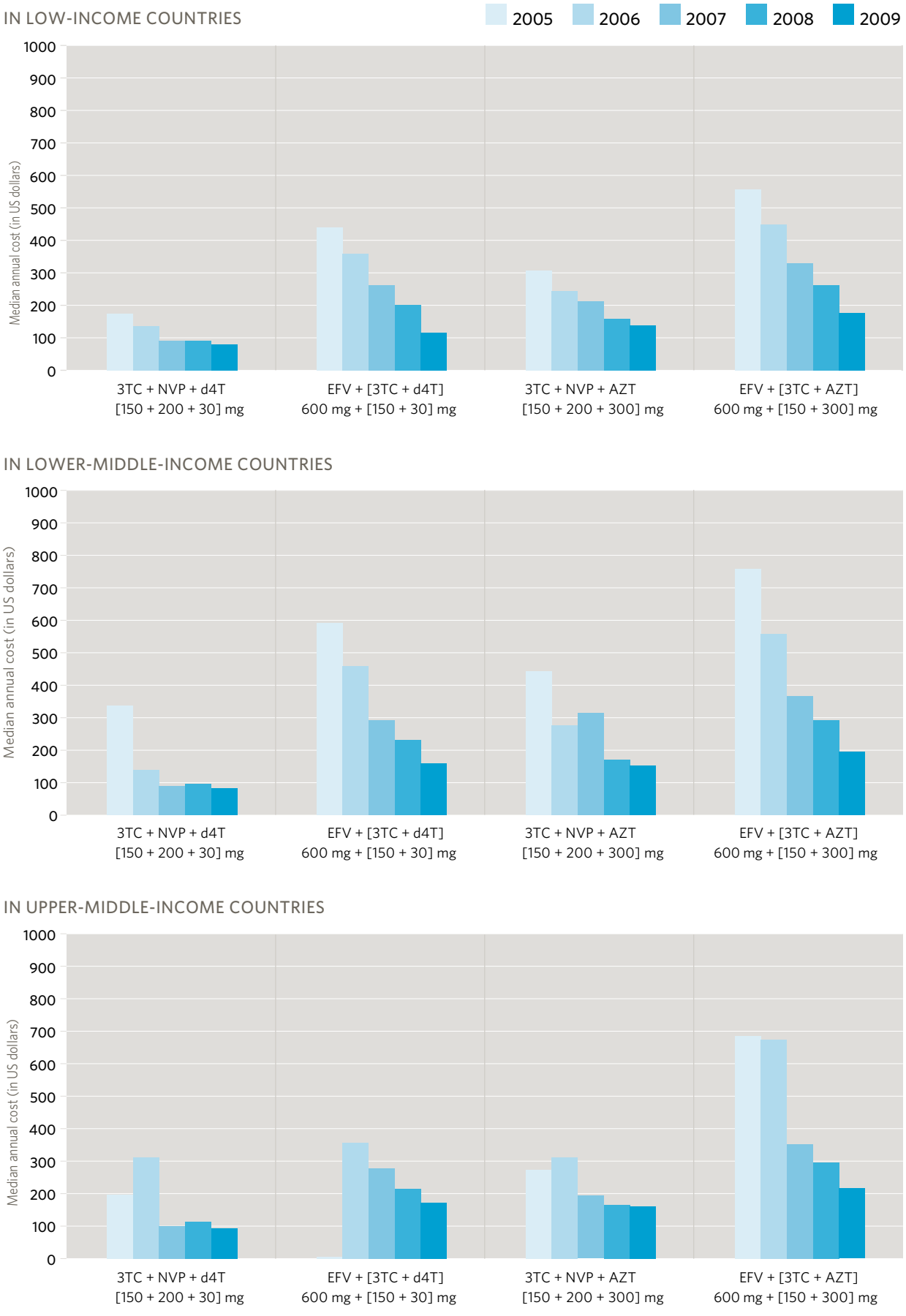
54 Genotyping refers to the process of determining the genotype of the virus, and thus the presence of mutations related to HIVDR, through the use of biological assays.

55 Pre-exposure prophylaxis (PrEP) is an experimental HIV prevention strategy that uses antiretroviral drugs to protect HIV-negative people from HIV infection.

56 *HIV testing, treatment and prevention: generic tools for operational research.* Geneva, World Health Organization, 2009.

57 The study found that providing HIV-positive pregnant women with a combination of antiretrovirals during pregnancy, delivery and breastfeeding cut the risk of HIV infection in infants by 42% compared to a short course of antiretrovirals ending at delivery. For more information, visit: http://www.who.int/hiv/mediacentre/kesho_bora/en/

Median annual cost (in US dollars) of first-line antiretroviral drug regimens by year, 2005–2009



CONCLUSION

HIV/AIDS in 2010 and beyond

These children are cared for by a community-based organization in Malawi that provides comprehensive services for AIDS orphans. According to the latest available data, more than 14 million children in sub-Saharan Africa have lost one or both parents to AIDS. Expanding HIV prevention and treatment will ensure that children are born HIV free and that parents are kept alive and healthy, enabling them to care for their families.

Despite funding gaps and implementation challenges, measurable progress was seen in the HIV response in the 2008–09 biennium.

New and effective HIV prevention strategies have been rolled out in many countries, including for populations most-at-risk; expanded PMTCT services have improved maternal health and child survival; new approaches to HIV testing and counselling are resulting in increased availability and uptake of these services; updated treatment recommendations promise to improve quality of patient care and life expectancy; new guidelines on human resources and integrated service delivery have strengthened health systems; and improved HIV surveillance and monitoring tools are generating more reliable data.

While much work remains, this report shows that progress can be achieved, even in the most difficult environments. Universal Access can be attained if the HIV response is sufficiently funded, informed by sound evidence, supported by adequate capacity in countries, well coordinated among key stakeholders, and integrated in broader health and development programmes.

The HIV pandemic is far from over. HIV remains the leading cause of death among women of reproductive age in sub-Saharan Africa. New HIV infections continue to outpace the expansion of prevention and treatment services for those in need. In many regions, vulnerable populations at high risk of HIV infection still cannot access the most basic HIV services.

Countries and international partners must intensify their efforts to protect gains in the HIV response, harness the momentum achieved to date, and accelerate progress towards the Millennium Development Goals. These challenges require the continued expertise of WHO, the leading global public health agency.

WHO is developing a comprehensive HIV strategic framework that will guide its work for 2011–15. The framework will ensure that WHO's core normative functions are carried forward, while at the same time maximizing impact in countries and contributing to broader public health outcomes. To that end, working with partners—people living with HIV, civil society, national governments, development agencies, donors, the private sector and other multilateral agencies—will be critical.

With expertise spanning all priority areas in the health sector response to HIV, WHO has helped many countries successfully expand HIV testing, treatment and prevention services and monitor the HIV response. WHO will continue to support countries to implement effective and sustainable national HIV responses that build health systems and contribute to the renewal of primary health care.

APPENDIX

Donors 2008–09

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AMDS	AIDS Medicines and Diagnostics Service
AusAID	Australian Agency for International Development
ART	Antiretroviral therapy
ARV	Antiretroviral
CDC	Centers for Disease Control and Prevention
CIDA	Canadian International Development Agency
EML	Essential Medicines List
GPRM	Global Price Reporting Mechanism
HIV	Human Immunodeficiency Virus
HIVIWG	Technical HIV Incidence Assay Working Group
IATT	Inter Agency Task Team
IMAI	Integrated Management of Adolescent and Adult Illness
IMCI	Integrated Management of Childhood Illness
PEPFAR	United States President's Emergency Plan for AIDS Relief
PITC	Provider-initiated testing and counselling
PMTCT	Prevention of mother-to-child transmission of HIV
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UN	United Nations
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
VCT	Voluntary counselling and testing
WHO	World Health Organization

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United Nations Office on Drugs and Crime (UNODC)

United Nations Trust Fund for Human Security (UNTFHS)

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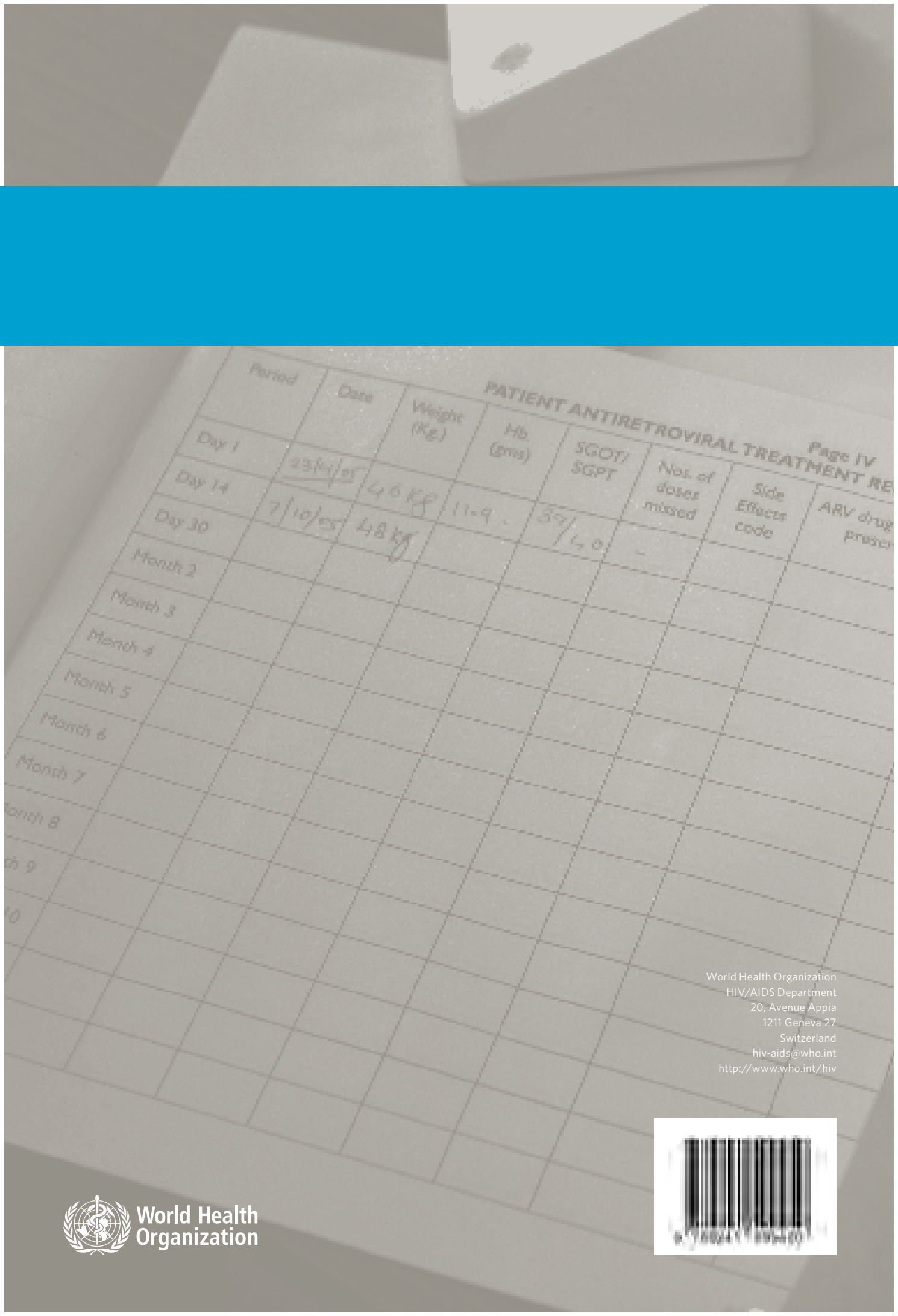

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