Coll. Antropol. **30** (2006) Suppl. 2: 3–10
Review

The Epidemiology of HIV and AIDS in the World

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A B S T R A C T

The worldwide epidemic of HIV continues to expand in many regions of the world, particularly in southern Africa, South and Southeast Asia, East Asia and Eastern Europe and Central Asia. Estimates are that at the end of 2005 there were 38.6 million persons living with HIV infection and that 4.1 million new infections and 2.8 million deaths from HIV occurred during the year. Regionally different patterns predominate from generalized heterosexual epidemics in sub-Saharan Africa and parts of the Caribbean to mixes of epidemics in which transmission among injection drug users, their sexual partners, commercial sex workers and their partners intersect. Multilateral and bilateral antiretroviral access campaigns, such as the World Health Organization's 3 x 5 initiative, have resulted in broader access to live-saving therapy for infected persons in low- and middle-income countries, but several million infected people who are clinically eligible for antiretroviral therapy remain untreated. The public health challenge worldwide is to keep the uninfected and to treat and care for those who have already been infected.

Key words: *HIV, AIDS, epidemiology, prevalence, Africa, Asia, Europe*

Introduction

Since the first description of the acquired immunodeficiency syndrome (AIDS) in 1981[1], the epidemiology of AIDS and its retroviral causative agent, human immunodeficiency virus (HIV), has been well described[2]. AIDS has come to be viewed not as an isolated syndrome, but as the most serious manifestation of a range of clinical and subclinical diseases and conditions caused by HIV. HIV infection, in turn, is now viewed not as an infection of isolated groups of people but as an infection that has spread worldwide in pandemic proportions.

Modes of Transmission

HIV is known to be transmitted through sexual contact with an infected partner[3]; parenterally through direct exposure to blood or blood products[4,5]; and vertically from an infected mother to her offspring[6] (Table 1). The likelihood of HIV transmission is dependent on the probability of exposure and the probability of infection after exposure[7,8]. Exposure is dependent on the background prevalence of HIV in a population and the frequency and nature of contact with sexual or needle-sharing partners randomly drawn from the population. The probability that an infectious inoculum of HIV will infect CD4+ T lymphocytes or a similarly susceptible cell line in a previously uninfected individual depends on a number of transmission cofactors such as co-infection with another sexually transmitted disease (both ulcerative and non-ulcerative), host susceptibility to infection, genetic variance in the infectiousness of the particular strain of HIV and temporal variability in the infectiousness of the host[3].

Persons with newly acquired HIV infection have the highest titers of virus in their blood[9], and persons with high titers in blood are more likely to transmit HIV than those with lower titers. This has been clearly demonstrated for blood borne and perinatal transmission[10], and there is evidence that at the population level high plasma or serum viral loads are associated with higher rates of sexual[11] and postnatal[12] transmission. The result is that often it is persons who have recently become infected and have not had sufficient time to develop measurable antibody are the most infectious[13]. This has led to explosive and sustained epidemics when there are high levels of sexual mixing and partner exchange[14,15].

Received for publication November 2, 2006

TABLE 1
MODES OF HIV TRANSMISSION

Sexual	Parenteral	Perinatal
• *Heterosexual, male to female* • *Heterosexual, female to male* • *Homosexual, male to male* • Artificial insemination with infected semen	• *Sharing of needles and syringes by injection drug users (heroin, cocaine, methamphetamines)* • Transfusion of contaminated blood • Administration of contaminated blood products (e.g., Factor VIII) • Organ transplantation with infected organs • Reuse of needles, syringes and intravenous tubing in health-care settings • Occupational injuries • Bites	• Prenatal • *Perinatal during birth* • *Postnatal from breast milk*

Most common forms of transmission are italicized.

Epidemiology

The HIV epidemic is extremely dynamic and has grown rapidly since HIV-1 and later HIV-2 entered human populations in the 1920s[16]. Virtually no country in the world remains unaffected. Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) estimate that the total number of people living with HIV was 38.6 million with a confidence bound of 33.4–46.0 million[2]. This is an increase of 200,000 people since 2004. In 2005, 4.1 million people were estimated to have become newly infected with HIV, and 2.8 million deaths were attributed to the infection, more of both than in any previous year[2].

Regionally the HIV epidemic grew in every region in the World except one – the Caribbean – in 2005 (Table 2). Sub-Saharan Africa remains the most affected region in the world, but there are also rapidly growing epidemics in Eastern Europe and Central Asia and in East Asia. Earlier epidemics have left a large burden of disease in South and Southeast Asia, Latin America and the high-income nations of North America and Western and Central Europe. The epidemics in Latin America, North America and Western and Central Europe show some signs of stabilizing, but, nonetheless, transmission still occurs in these regions[2].

Incidence and prevalence by region

Sub-Saharan Africa

Sub-Saharan Africa has just over 10 percent of the world's population but is home to 60% of all people living with HIV[17]. An estimated 24.5 million people were living with HIV in the region at the end of 2005, and approximately 2.7 million new infections, or 66% of all new infections worldwide, occurred there during that year[2]. Overall UNAIDS estimates that 6.1% of the adult population is infected. Moreover, 50 million Africans have been infected with HIV since the beginning of the epidemic, and more than 22 million have died[2]. Eight African countries have more than 1 million people living with HIV, and estimates are that among 15 to 24 year-old Africans, 1.9% of men and 4.6% of women are already infected[17].

The epidemic in sub-Saharan Africa is not homogeneous; some countries are much more severely affected than others[18] (Figure 1). In Somalia and Gambia the prevalence is around 2% of the adult population, whereas in South Africa and Zambia around 20% of the adult population is infected. In four southern African countries, the national adult HIV prevalence rate has risen higher than was thought possible and now exceeds 20%. These countries are Botswana (24.1%), Lesotho (23.2%), Swaziland (33.4%) and Zimbabwe (20.1%). West Africa is relatively less affected by HIV infection, but the prevalence rates in some countries are creeping up. In West Africa and Central Africa HIV prevalence is estimated to exceed 5% in several countries including Cameroon (5.4%), Central African Republic (10.7%), Côte d'Ivoire (7.1%) and Nigeria (3.9%). HIV infection in Eastern Africa varies between adult prevalence rates of 2.4% in Eritrea to 6.5% in Tanzania. In Uganda, a country severely affected by the HIV epidemic in the 1980s and early 1990s, the countrywide prevalence among the adult population is now 6.7%[2].

However, declines in the nationwide prevalence of HIV among adults appear to be underway in three countries, Uganda, Kenya and Zambia[19–21]. Within countries HIV infection can cluster geographically, particularly in urban and periurban areas. A variety of contextual factors contribute to the spread of the epidemic in these areas just as surely as do biological factors. Most important among these are the socioeconomic status of women, HIV stigma and inadequate knowledge of HIV transmission and its prevention. Together these factors lead to high risk of exposure and, if exposed, high risk of transmission. These risks are compounded by a hesitancy to seek counseling and testing and, if positive, to seek therapy because of stigma.

Sub-Saharan Africa is also home to the world's largest pediatric HIV epidemic. Of the 2.3 million children under 15 estimated to be living with HIV infection in 2005, 2.0

TABLE 2
HIV PREVALENCE, INCIDENCE AND MORALITY BY REGION, 2003 AND 2005

Region	Prevalent cases		Estimated adult prevalence		Incident cases		Mortality	
	2003	2005	2003	2005	2003	2005	2003	2005
Sub-Saharan Africa	23 500	24 500	6.2%	6.1%	2 600	2 700	1 900	2 000
South and South-East Asia	7 000	7 600	0.6%	0.6%	840	990	470	560
Latin America	1 400	1 600	0.5%	0.5%	130	140	51	59
Eastern Europe and Central Asia	1 100	1 500	0.6%	0.8%	160	220	28	53
North America	1 200	1 300	0.7%	0.8%	43	43	18	18
East Asia	560	680	0.1%	0.1%	100	140	28	33
Western and Central Europe	680	720	0.3%	0.3%	20	22	12	12
North Africa and Middle East	380	440	0.2%	0.2%	54	64	34	37
Caribbean	310	330	1.5%	1.6%	34	37	28	27
Oceania	66	78	0.3%	0.3%	9	7	2	3
Total	36 200	38 600	1.0%	1.0%	3 900	4 100	2 600	2 800

*Estimates x 1,000. UNAIDS, 2005 and 2006.

million (90%) lived in sub-Saharan Africa[2]. Similarly 91% of the 570,000 estimated child deaths and 90% of the estimated 700,000 new infections in 2005 were in the region. This is primarily because the predominant mode of transmission in sub-Saharan Africa is through heterosexual intercourse, which has led to more than half of the infected population being female. In fact more than three quarters of all HIV-infected women in the world live in sub-Saharan Africa.

Asia

Asia has the second largest number of people living with HIV/AIDS. Until the late 1980s, no Asian country had experienced a major AIDS epidemic, but by the late 1990s the disease was well established across the region. UNAIDS reports that in 2005 the total number of people living with HIV/AIDS in Asia was 8.3 million (confidence limits 5.7–12.5 million)[2]. The continent includes the world's most populous countries – China and India –with 2.25 billion people between them. In both countries, national HIV prevalence is low, 0.1% in China and between 0.5% and 1.5% in India[2].

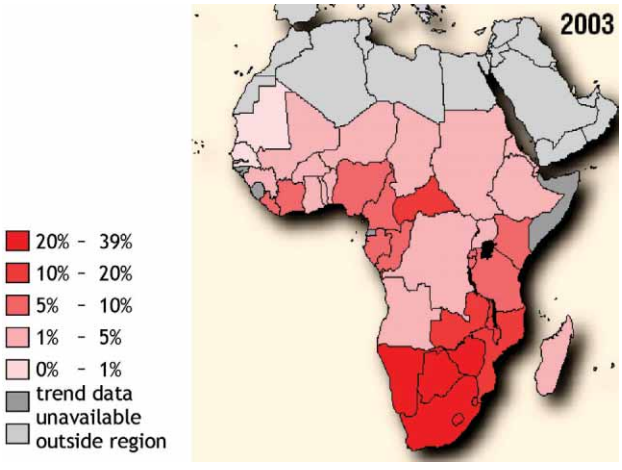

Fig. 1. HIV prevalence among adults by country, WHO African Region, December 2003. Source: UNAIDS

East Asia

China has the largest HIV epidemic in East Asia. The latest estimates are that as of the end of 2005, there were approximately 650,000 people currently living with HIV/AIDS in China. New HIV cases were being transmitted primarily through injecting drug use and sex[22,23]. As a major drug transshipment country with source drugs from the »Golden Triangle« area of Southeast Asia, China has also become an increasingly important drug consuming market[24,25]. About half of China's 1.14 million documented drug users inject, and many share needles. Injecting with non-sterile needles and syringes has resulted in 42% of cumulatively reported HIV/AIDS cases thus far[26]. The potential for even further spread is underlined by a study that examined drug use practices, including injecting drugs and needle sharing, and unprotected sex among drugs users in southwestern China. More than two-thirds of 833 institutionalized drug users reported that they frequently injected drugs intravenously or intramuscularly, 78% shared needles, and 73% had multiple sexual partners[27].

South and Southeast Asia

In India by the end of May 2004, the total number of AIDS cases reported was 109,349 of whom 31,982 were women[28–30]. While the Indian HIV/AIDS epidemic is still largely concentrated in at-risk populations, including sex workers, injecting drug users, and truck drivers, surveillance data suggest that the epidemic is moving beyond these groups in some regions into the general population. In northeastern India along the Myanmar border and in major cities such as Delhi, Chennai and Mumbai drug injecting is also a major source of new infections, and prevalence has risen rapidly in injection drug users[28,31,32].

However, the majority (85%) of new infection is due to heterosexual transmission, particularly among commercial sex workers, their clients and the sexual contacts of their clients[33]. Although nationwide HIV prevalence rate is low (0.9%), in some parts of the country the epidemic has already »generalised«, with more than 1% of women accessing antenatal services in public health institutions testing sero-positive[34]. There are an estimated 2.3 to 8 million female sex workers in India[35], and HIV information and awareness among sex workers appears to be low, especially among those working in the streets. Surveys carried out in various parts of India in 2001 found that 30% of street-based sex workers did not know that condoms prevent HIV infection, and in some states, such as Haryana, fewer than half of all sex workers (brothel- and street-based) knew that condoms prevent HIV. Large proportions of sex workers (42% nationally) also thought they could tell whether a client had HIV on the basis of his physical appearance[36].

Other Southeast Asian countries that have had large HIV epidemics or are dangerously close to them are Cambodia, Thailand, Vietnam, and Indonesia due to an explosive mix of heroin and commercial sex. For example in Haiphong, Vietnam, in 2000 50% of commercial sex workers reported sex with a male injection drug user, and an only slightly smaller percentage of male injection drug users reported buying sex from a commercial sex worker[2]. There is, however, good evidence that the HIV epidemic has slowed in Thailand and Cambodia.

Eastern Europe and Central Asia

Eastern Europe and Central Asia is a region in which the HIV epidemic continues to grow; the number of people living with HIV in this region reached 1.5 million in 2005[2]. According to UNAIDS, the total number of newly reported HIV/AIDS infections in Central Asia grew from 88 in 1995 to 6,706 in 2003, with most new infections occurring in Kazakhstan, Uzbekistan, and Kyrgyzstan[37]. However, UNAIDS estimates that there were closer to 50,000 HIV-positive people in the region in 2001, with 20,000 in Kazakhstan alone. Furthermore, the US Centers for Disease Control and Prevention (CDC) estimated the regional total to be 90,000 in 2001, with the potential to increase to more than 1.6 million in 2005[38]. The explosive growth of HIV in the region has been fueled primarily by injection drug use that follows heroin trafficking routes from Afghanistan across the region into Europe[39]. This is coupled with reported outbreaks of sexually transmitted infections, which facilitate HIV transmission. For instance, the United Nations Office on Drugs and Crime estimates indicate that Kazakhstan has around 250,000 drug users, almost half of whom are injectors[40] at a time when the incidence of syphilis increased to 160 cases per 100,000. Knowledge of HIV/AIDS in the country is low both among high-risk groups and young people; according to a national survey only 15 percent of young people have adequate knowledge of HIV prevention[41], and harm reduction initiatives cover only an estimated 8–10% of the injecting-drug-using population[42].

An interesting exception to the rule is Iran, which has instituted progressive harm reduction policies to combat a rising epidemic among heroin injectors. Iran has historically been a major consumer of opium, and as supplies from Afghanistan waned earlier in the decade, many users switched from smoking opium to injecting heroin with a concomitant rise in HIV, hepatitis B and hepatitis C[43,44].

In Eastern Europe – notably Estonia, Latvia, Lithuania, Moldova, Russia and Ukraine – HIV incidence rates are among the highest in the world[45,46]. Today, Russia has the largest HIV epidemic in Europe and accounts for 70% of the cases in the Eastern Europe and Central Asia region[47]. By the end of 2004, almost 300,000 cases of HIV have been officially registered in the Russian Federation since the beginning of the epidemic, and this number continues to grow[47,48]. According to the European Center for the Epidemiological Monitoring of AIDS, in the Russian Federation more than half of the 33,969 cases newly reported in 2004 had no transmission category reported; of the remaining cases, 69% were injection drug users[48]. Many analysts date the sudden explosion of HIV to the fall of the Soviet Union in the early 1990s and the subsequent economic and social collapse, which in turn led to unemployment and drug use[50,51]. By some estimates, there could be as many as 3 million injecting drug users in the Russian Federation alone and more than 600,000 in Ukraine[37]. Most of these drug users are male and many are very young; in St. Petersburg, studies found that 30% of injectors were under 19 years of age, while in the Ukraine 20% were still in their teens. In a study of drug use in the city of Togliatti 56% of drug injectors were infected with HIV, and 36% had injected with used needles and syringes in the last 4 weeks[50]. The situation and the trajectory are similar in the Ukraine, where the national HIV prevalence rate is already higher that 1%[37]. As in Russia the bulk of HIV infection is among injection drug users[52]. However, as the epidemic has spread, more women have been infected, and the number of HIV-infected infants has tripled in the last five years[53].

Western and Central Europe

Central Europe in contrast to Eastern Europe has a much smaller and more stable HIV epidemic. HIV in the region is largely concentrated in drug injectors, as in Russia and the former Soviet republics, and three-quarters of all cases are in Poland and Romania[46]. Southeastern Europe has a more mixed picture. While the prevalence has in general been low[54], political instability, the wars following the disintegration of Yugoslavia and economic depression following the end of the Warsaw Pact created an environment in which behavioral and cultural shifts, such as injection drug use, commercial sex work and migration, created a situation in which HIV could be rapidly transmitted[55]. In addition conditions, such as high rates of sexually transmitted diseases, in other countries in southeastern Europe, such as Romania, have the potential to facilitate explosive heterosexual transmission[2]. In only a few countries, such as Slovenia

and Croatia, are the substantial numbers of cases among men who have sex with men[48, 56]. Additionally in Croatia, merchant seamen, in many ways analogous to truck drivers, appear to have high risk for acquiring HIV infection sexually and have exposures in hyper-endemic parts of the world as a result of their voyages[57]. This pattern has also been seen in commercial fisherman in Cambodia and Thailand[58,59].

In Western Europe more than half a million people are living with HIV, and that number continues to grow[2]. There are in essence three separate epidemics occurring in Western Europe – one among men who have sex with men, one among injection drug users and one among heterosexuals. While there is good evidence that rates of transmission among men who have sex with men and injection drug users declined by the late 1980s, by early in 2000 an increase in cases among heterosexuals began to appear[46]. Data from 11 countries which have provided individual HIV data since 1998 (Belgium, Denmark, Finland, Germany, Greece, Iceland, Luxembourg, Norway, Sweden, Switzerland, United Kingdom), indicate that the rise in diagnoses of infections among heterosexuals is largely due to an increasing number of cases among persons originating from countries with generalized HIV epidemics: from 30% of heterosexual infections in 1998 to 53% in 2003, over 90% of which were in migrants from sub-Saharan Africa[48]. In Germany, the number of new HIV diagnoses increased in 2002 among heterosexuals originating from countries with generalized HIV epidemics, most of who were believed to have been infected in their countries of origin. In Sweden, more than 80% of reported HIV infections acquired through heterosexual contact were probably acquired abroad. In Belgium, 73% of HIV infections ever diagnosed in heterosexually infected people were in non-Belgian individuals – mostly from Africa[48]. To determine when, where, and how HIV transmission has occurred is often difficult and further hindered where language or cultural barriers exist. Most HIV-infected migrants are unaware of their HIV status and are diagnosed only when they become symptomatic or during pregnancy. Their reasons for migration to Western Europe are economic or political and not connected with seeking HIV treatment, although this may sometimes happen[47].

Despite the increase of new HIV diagnoses in those infected through heterosexual contact, injection drug users and men who have sex with men remain the most affected groups in Western Europe. Recent studies conducted among men who have sex with men in England, Wales and Northern Ireland has found that contrary to general expectations, recent HIV infections have been occurring at similar rates in men of all age groups between 20 and 44 years. The general opinion has been continuing HIV transmission is principally due to younger men who have sex with men less aware of the safe sex message of the late 1980s and early 1990s and, as a result, adopting high-risk behaviors and practices. In most years, however, incidence has been highest either in those aged 35–44 years or those aged 25–34 years. These data indicate that interventions to reduce risky behavior and practices need to be intensified and to be targeted at older, as well as younger, men who have sex with men[60].

In Italy and Spain, HIV incidence is estimated to have increased much more rapidly among injection drug users than among other transmission groups, reaching over 15 per 100 000 population towards the end of the 1980s[61]. HIV diagnoses among injection drug users have dropped steeply in the 1990s in Spain after methadone treatment and needle-exchange projects were introduced. However, high HIV prevalence is still found among injection drug users in parts of Spain, such as Catalonia[2]. Italy has a similarly prominent epidemic among injection drug users, with almost 60% of AIDS cases reported among injectors[48] but also has experienced localized outbreaks of sexually transmitted diseases reflecting a new rise in high-risk sexual behavior. As a consequence, HIV is being spread sexually. For instance in Rome new HIV infections in a sexually transmitted disease clinic have increased dramatically in the period 2000–2003 compared to 1996–1999[62].

North America

UNAIDS estimates that there were 1.3 million people living with HIV in North America at the end of 2005 and that the number of new infections (43,000) far outpaces the number of deaths (18,000). As opposed to less developed countries, this is because HIV/AIDS survival has increased markedly in the region as the direct result of highly active antiretroviral therapy[2].

In the United States of America an estimated 40,000 people have been infected with HIV each year during the past decade[2]. As in Western Europe, men who have sex with men, injection drug users and high-risk heterosexuals all have experienced high rates of HIV infection. However, unlike Europe there has been significant transmission of HIV from injection drug users to non-user heterosexuals. This has been especially pronounced among persons of African descent in the United States who comprise about 12.5% of the country's population. Currently about half of newly reported HIV infections in recent years have been among African Americans[63], and African-American women are almost three times as likely to be infected as women of European descent[2].

Sex between men is the most common route of HIV infection in both the United States and Canada, accounting for 63% of newly diagnosed HIV infections in the United States in 2003[2], but African Americans are also disproportionately represented among men who have sex with men. Analyzing data from 11 states, a recent Centers for Disease Control and Prevention study found that 34% of HIV-positive African-American men said they had sex with both women and men. However, only a small proportion of HIV-positive African-American women reported knowing that their partners also had sex with men[64].

The HIV epidemic in Canada is more of a hybrid between the Western European epidemic, with substantial numbers of cases among immigrants from countries with

generalized epidemics, and the United States' epidemic, with cases among men who have sex with men, injection drug users and ethnic and racial minorities[2].

Latin America

The number of people living with HIV in Latin America has risen to an estimated 1.8 million[2]. A few countries in Latin America, such as Honduras, and some areas in Brazil have reached prevalence rates above 1% in pregnant women and can be considered to have generalized epidemics[65]. The dominant mode of transmission varies from country to country, but men who have sex with men and injection drug users are the predominant groups that have been affected by HIV in most Latin American countries. Commercial sex work, especially in Central America and along the West Coast of South America, has also been an important amplifier of the epidemic[2]. In Central America and Brazil, heterosexual transmission beyond commercial sex work plays an increasing and important role for HIV dissemination[65].

In Latin America, men who have sex with men may not identify themselves as »gay« and frequently have sex with women. In Brazil, 11% of the participants in a sexual practices survey in Fortaleza considered themselves to be bisexual. The same survey found that a 23% of men who have sex with men had at least one heterosexual contact during the previous year. Furthermore, two-thirds of men who had unprotected sex with their female partners also had unprotected anal sex with their male partners[66]. Similar patterns have been reported in the Dominican Republic, where sexual contact between bisexual men and women is common.

Injection drug users are the second group that can act as a bridge for HIV infection to the general population. In Brazil 21% of AIDS cases are injection drug users, and 38% of AIDS cases in women resulted from sexual infection from injection-drug-using partners or drug use themselves. In the Southern Cone of South America, the preferred drug of injection is cocaine, and a band of HIV infection among cocaine injectors stretches along cocaine trafficking routes from Bolivia and Paraguay to the Atlantic coastal ports of Argentina, Brazil and Uruguay[67]. Colombia also has a high risk from injecting practices. The country is currently considered to be one of the most important producers of opium by-products, ranking fourth after Myanmar, Laos and Afghanistan[67]. However, sex between men is the predominant mode of transmission. HIV prevalence of 20% was recently reported among men who have sex with men in Bogotá, while another survey in the same city found consistently low condom use in this group[2].

Caribbean

At the end of 2005, an estimated 330,000 people were living with HIV and AIDS in the Caribbean. Some 30,000 people were newly infected during 2005, and there were 27,000 deaths due to AIDS. Estimated adult prevalence is greater than 1% in Barbados, the Dominican Republic, Jamaica and Suriname; greater than 2% in the Bahamas, Guyana and Trinidad and Tobago; and greater than 3% in Haiti[2]. Higher prevalence rates are found only in sub-Saharan Africa, making the Caribbean the second-most affected region in the world. More than half of infected adults are women[2].

According to U.S. Agency for International Development[68], AIDS is the leading cause of death among 15 to 44-year-olds in the region; patients with AIDS occupy 25 percent of all hospital beds in the region. Late diagnosis is common, and few people receive treatment, even for opportunistic infection. HIV is transmitted primarily through sexual contact (64% among heterosexuals, 11% among men who have sex with men) amplified by poverty, unemployment and gender inequality[2].

Antiretroviral Therapy

As the incidence of HIV has increased worldwide, so have the incidence and prevalence of AIDS and the other advanced clinical stages of HIV infection. We know from high- and middle-income countries that effective antiretroviral therapy can lead to increased survival for individual patients and decreased mortality rates at the population level[69–71]. Today, more resources are available for the fight against HIV than ever before, but at the global level our treatment efforts have not yet been fully realized. Worldwide in 2005, more people died from AIDS than in any previous year[2].

The World Health Organization launched an antiretroviral treatment initiative in 2003 to treat 3 million of the 6 million people living in low- and middle-income countries who were clinically eligible for antiretroviral therapy[72]. This initiative, termed 3 x 5 because of the target of 3 million people under therapy by 2005, has led to more than a doubling of antiretroviral therapy to around 1 million patients by June 2005. Moreover, to date, 14 of target countries are providing antiretroviral therapy to at least 50 per cent of those who need it, consistent with the »3 by 5« target, including a remarkable 80% or more coverage in Brazil, Argentina, Chile and Cuba[2].

The current momentum to expand treatment access in sub-Saharan Africa and Asia, where the burden of disease is greatest, is especially encouraging. Approximately 500,000 people in the region are receiving treatment, a three-fold increased in one year from 2003 to 2004. Progress in Asia, the region with the second highest need for treatment, has also been significant, with the number of people receiving treatment increasing nearly three-fold –from 55 000 to 155 000 – during this same period. In Eastern Europe and Central Asia, the number of people on treatment has almost doubled from 11 000 to 20 000 people. Available data and trends suggest that the goal of providing antiretroviral therapy to 3 million people by the end of 2005 was not fully met, but UNAIDS reports that as the result of antiretroviral access efforts that began in 2003, between 250,000 and 350,000 deaths were averted in 2005[2].

Conclusions

The incidence and prevalence of HIV infection are increasing worldwide, and the complexity of the pandemic is increasing with them. As we approach the 25th anniversary of the first report of AIDS, the need for primary prevention of HIV infection is ever more clear, crystallized by the sobering reality of the depth and breadth of the pandemic. The need is also clear for treatment and care of persons who have progressed to AIDS and the less severe clinical stages of the infection. To achieve these goals, however, will require a redoubling of scientific efforts to further refine antiretroviral therapies and care models; to develop a safe, effective and inexpensive vaccine; and to renew our collective commitment to the behavior changes that have already led to decreasing incidence in several parts of the world.

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EPIDEMIOLOGIJA HIV-INFEKCIJE I AIDS-A U SVIJETU

S A Ž E T A K

Svjetska epidemija zaraze HIV-om nastavlja se širiti u mnogim dijelovima svijeta, osobito u južnoj Africi, južnoj i jugoistočnoj Aziji, istočnoj Aziji i istočnoj Europi i središnjoj Aziji. Procjenjuje se da je krajem 2005. živjelo 38,6 milijuna osoba zaraženih HIV-om i da je bilo 4,1 milijuna novih infekcija i 2,8 milijuna umrlih te godine. Postoje regionalne razlike od opće heteroseksualne epidemije u supsaharskoj Africi i dijelova Kariba do miješane epidemija u kojoj se preklapa prijenos među korisnicima droga, njihovim seksualnim partnerima, seksualnim radnicama i njihovim partnerima. Multilateralni i bilateralni programi provođenja antiretrovirusnog liječenja poput incijative 3 x 5 Svjetske zdravstvene organizacije, rezultirali su većom dostupnošću životno-spašavajućeg liječenja osoba zaraženih HIV-om u slabo ili srednje razvijenim zemljama, ali više milijuna zaraženih koje bi prema kliničkim mjerilima trebalo liječiti ostaju neliječeni. Svjetski javnozdravstveni izazov jest zadržati nezaražene nezaraženim i liječiti sve one koji jesu zaraženi.