

Editorial

# HIV/AIDS in the Eastern Mediterranean: a false immunity?

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## A global pandemic

In the past year, an estimated 4.8 million people became newly infected with HIV, and approximately 3 million died of AIDS [1]. Some 37.8 million people are now living with the virus, whose cumulative death toll since the first cases were identified in the early 1980s is now well over 20 million. While no country in the world is unaffected by HIV, prevalence and pathways of the pandemic vary widely. Sub-Saharan Africa remains the hardest hit region; in Asia, the most populous region in the world, prevalence is low by contrast but affects very large populations and is concentrated disproportionately in injection drug users [2]. In Eastern Europe and Central Asia the pandemic is also fuelled overwhelmingly by injection drug use, and 80% of the new infections occur in people aged under 30 years [3].

Seroarchaeological studies suggest that HIV was first introduced into the human population in Central Africa between the early 20th century and the 1950s [4]. However, the immune disorder that would come to be labelled 'AIDS' was first described clinically in 1981, among homosexuals in the United States of America [5-7]. A standard case definition was not developed for several years [8]. By then, three major pathways of HIV infection had been observed

in addition to sexual intercourse: injection drug use, blood transfusion and mother-to-child transmission [9-13]. In late 1983, a retroviral pathogen was isolated and identified as the causative agent of AIDS [14].

Two major families of HIV have been identified. HIV-1 is the causative agent of the AIDS epidemic in Central and East Africa, while HIV-2 originated in West Africa and has since spread to parts of Europe and south-western India [15,16]. Molecular analysis shows substantial differences between the sequences of the two genomes, and the proteins of HIV-1 and HIV-2 are sufficiently distinct to cause problems for the development of vaccines and diagnostics. While HIV-1 and HIV-2 are spread in the same way, the frequency of transmission for HIV-2 is considerably lower, probably due to much lower virulence in many asymptomatic individuals [17,18].

## HIV/AIDS in countries of the Eastern Mediterranean Region: deceptively low prevalence?

In the Eastern Mediterranean Region, an estimated 700 000 people are currently living with HIV/AIDS but only 14 198 AIDS cases have been officially registered since the start of the epidemic, indicating under-reporting, underdetection and surveillance

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difficulties. Of the 22 countries of the Region, complete data were lacking for 9 countries for 2003, and data from 2 others had to be discarded because of reporting problems. Although the prevalence of HIV infection among adults in the Eastern Mediterranean Region (0.3%) is roughly equivalent to figures for Western Europe, the number of estimated new HIV/AIDS cases for 2003 is about 60% higher (55 000 in the Eastern Mediterranean Region versus 35 000 in Western Europe), demonstrating the alarming increase in the epidemic in the Region [19].

Based on available figures, the regional epidemic is being driven largely by heterosexual transmission, which represents almost 80% of the cumulative total of AIDS cases reported. However, infection through injection drug use is increasing, particularly in the Islamic Republic of Iran, Bahrain, Libyan Arab Jamarihiya and Oman. Regionally, 10% of reported AIDS cases were among injection drug users in 2003, compared with 2.4% in 1999. In 2002, injection drug users accounted for 66% of reported AIDS cases in the Islamic Republic of Iran [20]. About two-thirds of reported AIDS cases are within the 20–39-year age group, with highest levels in the 20–24-year age group. Men are generally more affected than women, and women tend to acquire infection at a younger age than men. By contrast, the safety of blood and blood products has greatly improved. Transmission via this route has been reduced from 7.7% of cases in 1994 to 0.4% in 2003.

It is important to stress that low prevalence in the Region is not equivalent to low risk. Past experience has shown that local epidemiology can change very rapidly, as was the case in Indonesia, Nepal, Central Asia and the Baltic States [21–24]. Unfortunately, low prevalence is often accompanied by deprioritization of HIV/AIDS

interventions by national governments. The false sense of security is compounded by inadequate HIV surveillance. Behavioural surveillance among vulnerable groups and sexually transmitted infection surveillance are in general incomplete and unrepresentative, with low population coverage. HIV surveillance systems are improving in some countries, but most are at an early stage in the adoption of up-to-date methods—for example, the establishment of comprehensive HIV/AIDS prevention and treatment services in community-based clinics and prisons in the Islamic Republic of Iran [20].

In order to improve the quality of surveillance, prevention and care, it is important first and foremost to defuse the stigma and blame attached to HIV. High-risk populations often suffer from such social and cultural disfavour that the political costs of prevention are perceived to eclipse the public health benefits. In the Eastern Mediterranean Region, as elsewhere, successful interventions must aim first to improve the general level of awareness, knowledge and understanding of the epidemic at all levels of government, civil society, health professionals and the wider community.

Improving HIV surveillance systems is often made more difficult by weak health systems, especially in areas of political instability and armed conflict, such as Afghanistan, Iraq, Somalia and Sudan. Even where such extreme disruption does not exist, there is a chronic lack of funds to confront the epidemic. At present, antiretroviral therapy (ART) is accessible to less than 5% of those who need it in the Region, and the majority of people living with HIV/AIDS remain unidentified. Due in part to the lack of independent manufacturing capacity and procurement channels for antiretrovirals, the price of therapy in the Region is relatively high.

## WHO's response to the HIV epidemic

WHO has been an active partner in the global fight against HIV since the early days of the epidemic. Initially, this activity was directed through the regional Collaborating Centres on Acquired Immunodeficiency Syndrome, beginning in late 1983 [25]. WHO staff disseminated information on testing procedures, helped to coordinate pharmacological and clinical research and surveillance, and promoted risk reduction programmes aimed at policy-makers and the public at large [26]. In 1986 the Special Programme on AIDS was established, later reformed as the Global Programme on AIDS and finally UNAIDS [27]. The programme's initial focus was on the African and American regions; and activities concentrated initially on site visits, training workshops, case management and epidemiological surveillance. The Special Programme also helped to drive research on social and behavioural determinants of transmission and spread, and to develop protocols for seroprevalence studies as well as standard case definitions [28,29].

After the clinical efficacy of "triple therapy" was first demonstrated in the mid-1990s, pressure to make antiretrovirals available in the developing world began to mount. In 1996, the Brazilian legislature guaranteed all AIDS patients in the country, regardless of their financial or legal status, access to necessary medications for HIV treatment, including ART. The impact on the course of the epidemic was profound: AIDS-related mortality dropped 50% between 1995 and 1999; overall case incidence declined sharply; and prevalence was cut to half the rate projected in 1992 [30,31]. Eight years after the programme in Brazil was initiated, a cross-sectional study of patients in treatment at public HIV clin-

ics in Rio de Janeiro showed rates of response and adherence to ART comparable to those reported from developed countries [32].

WHO advocacy and technical support for ART in the developing world was limited initially by the prohibitively high price of medicines, poor local infrastructure and response in high-burdened countries, and sluggish political commitment and coordination in donor states. By 2002, however, these conditions had changed dramatically. At the 2002 International AIDS Conference WHO Director-General Gro Harlem Brundtland introduced the target of making ART accessible to 3 million affected individuals by the end of 2005. The 3 by 5 target was founded on four key principles: treatment as a core element; urgency; consensus interim targets; and simplified diagnostic and programme tools. AIDS is unusual in the history of epidemics because proven, effective ways of interrupting the course of the disease have existed since shortly after its emergence; yet those methods were not available to most of the world's population. The formulation of 3 by 5 resulted from a widespread sense that this inequality was economically, politically, morally, and epidemiologically unacceptable.

Countries in the Eastern Mediterranean Region have been active participants in 3 by 5 activities. Sudan remains the most heavily-burdened country in the Region, and is hampered simultaneously by having one of the weakest health systems. Other countries demonstrating increased commitment to scale up access to ART include Djibouti, Egypt, Islamic Republic of Iran, Libyan Arab Jamarihiya, Pakistan, Somalia and Yemen. Two years ago, the WHO Regional Office developed the Regional Strategic Plan 2002–2005 for Improving Health Sector Response to HIV/AIDS and STIs,

and it has been working actively to coordinate this effort with broader 3 by 5-related activities. Efforts are focusing on the improvement of HIV/AIDS/STI surveillance, establishing services and control programmes for STIs, developing and implementing proposals for extra-budgetary funding, and ensuring access by countries to low-price antiretrovirals.

With a relatively low HIV prevalence across the Region, now is the time to act. Efforts need to be focused on the most vulnerable populations, among whom interventions can have the greatest impact.

These include drug users, prostitutes, prisoners, homosexuals, mobile and displaced populations, young people and women. It is also crucial that health systems are strengthened to ensure that the capacity exists to cope with the increasing numbers of people presenting with HIV-related illness. Innovative and effective programmes are being developed in the Region which can be used as models for the rest of the world. It is essential that they be further developed, expanded, and strengthened.

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