
EDITORIAL: GLOBAL HIV/AIDS - A CHANGING PICTURE

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The World Health Organization (WHO), has recently released new country-by-country estimates of the number of people living with HIV infection (page 59). These estimates, which accompanied the regular global summary of reported AIDS cases, represent the most comprehensive attempt so far to measure the spread of HIV infection around the world.

For some countries, including Australia, the estimated number of people living with HIV infection was provided by a national expert group, or through other specific AIDS program initiatives. For most countries, and in particular the developing world, WHO constructed estimates based on the best available information.

The preferred approach to estimating the number of people with HIV infection in a country is the method of back-projection, which uses counts of diagnosed AIDS cases as a means of inferring the number of HIV infections that must have occurred in the past to give rise to these cases. This method relies on accurate AIDS case-counting, which is consistent over time, as well as sophisticated statistical techniques, and has been primarily used for Western developed countries. In developing countries, serological surveys for HIV antibody in population groups have been the basis for estimating the number of people with HIV infection. As the extent and quality of such surveys are highly variable across countries, there are limitations in the comparability of national data sets. WHO has nevertheless attempted to standardise the estimates as much as possible.

Comparing the reported AIDS cases with the estimated number of HIV infections, it is striking to note the implicit under-reporting from Africa where the AIDS epidemic probably began: while 67% of the world's people with HIV are estimated to live in Africa, only 34% of reported AIDS cases come from this continent. The contrast in the two proportions is even more dramatic for Asia (18% versus 2.2%). In this case, the explanation is also the recency of most HIV infections and the fact only a limited proportion have progressed to AIDS as yet.

Within Africa, the new estimates of HIV infection confirm the huge impact of the epidemic in the Central and East African countries of Kenya, Uganda, Tanzania, Zaire, Zambia and Zimbabwe. They also reveal the presence of over a million HIV infections in Nigeria, the most populous African country, which had only reported 1,591 AIDS cases by mid-1995. Kenya and Uganda, also with a million or more people estimated to be living with HIV infection, had reported 56,000 and 46,000 AIDS cases respectively. Another emerging epidemic is taking place in South Africa, with 8,400 AIDS cases reported, and an estimated 650,000 people living with HIV infection. The WHO report appears to make no distinction between HIV-1, the subtype prevalent in

most parts of the world, and HIV-2, which has primarily been associated with West Africa.

In the Americas, Brazil is fast approaching the United States as the country with the largest number of people living with HIV infection, despite having reported less than one seventh as many AIDS cases. Nearly 40% of the world's AIDS case reports have come from the United States (compared to barely 4% of the estimated number of people with HIV infection). The cumulative AIDS case count in the United States has just passed the half-million mark, while the total number currently living with HIV is estimated at 700,000. The relatively low ratio of these two figures indicates the advanced stage of the epidemic in the United States compared to most other countries.

In Asia, the new global focus of HIV infection, the pattern of the epidemic remains very uneven. India is now estimated to be the country in the world with the greatest number of HIV infections, representing 10% of the global total and more than half the cases in Asia. This is still a smaller proportion than the 16% that India's citizens represent of the world population. Thailand and Myanmar (formerly Burma) make up a further 30% of the cases estimated for Asia. China, with fully 21% of the world population, is still estimated to have been barely affected by the HIV epidemic, having an estimated 10,000 cases. Indonesia, with the third largest population in Asia (and the fourth largest in the world), is estimated to have 50,000 people living with HIV infection. On a *per capita* basis, Cambodia has emerged as one of the countries most affected by the HIV epidemic in Asia, with an estimated 90,000 persons (1% of the population) living with HIV infection.

In Europe, Italy, France and Spain together account for two-thirds of the people with HIV infection. On a *per capita* basis, Spain now has the highest prevalence of HIV infection among all of the developed countries, a position long held by the United States.

At first glance, the estimated 11,000 people living with HIV infection in Australia seems low, given the routinely published counts of 19,000 reported HIV infections and around 4,000 deaths following AIDS. The difference is attributable to the substantial over-reporting of HIV diagnoses, particularly in the early period of the HIV epidemic when less attention was given to surveillance procedures, resulting in a substantial amount of double counting. Also notable in the small part of the world referred to by WHO as Oceania, is the estimated number of people with HIV infection in Papua New Guinea. On a *per capita* basis, the Papua New Guinea prevalence of HIV infection has now passed that of Australia.

In addition to reviewing the case counts provided by these reports it is essential that HIV epidemiology is continually reviewed on a national and regional basis to assess the needs of prevention programs and their effectiveness.