COMMENTARY

Does Access to Antiretroviral Drugs Lead to an Increase in High-Risk Sexual Behaviour?

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Over the last few years the fight against the HIV epidemic appears to be yielding increasingly positive results: the number of people surviving and living with HIV has been on the rise and, overall, the numbers of new infections have been on a steady path of decline. This progress is largely attributed to the increased accessibility to antiretroviral therapy (ART). Not only does ART improve the length and quality of life, the drugs are an important tool in suppressing HIV viral loads, thus reducing a) opportunistic infections such as Tuberculosis; b) transmission of HIV from a mother to her child; and c) transmission of HIV via sexual contact. These reasons have led to the emergence of a '*treatment as prevention*' approach to tackling the epidemic, which urges for a scale-up in ART distribution worldwide. Initiatives such as that of the U.S. PEPFAR (President's Emergency Plan for AIDS Relief), have advanced this strategy by making antiretroviral drugs exponentially accessible in low-income public health systems.

However, at this point the impact of the large-scale distribution of antiretroviral drugs needs to be critically examined – the positives have been outlined above so let us take a look at another potential facet altogether. First let us agree that the large-scale influx of ART is changing the perception of HIV: from a disease inevitably incurring suffering and death to a less feared and pronounced chronic disease. With this in mind we should thus venture to ask ourselves: could this lowered anxiety associated with HIV and AIDS lead to an increase in population-wide high-risk sexual behaviour (either because HIV transmission appears to be less likely - since HIV carriers are no longer as visibly distinguishable as they once would have been - or because HIV is no longer perceived to be the death sentence it once was)?

There has been very little research on the potential impact of large-scale ART distribution on the sexual behaviour of a general population (comprising of both HIV infected and uninfected people). During the 1990's, some high-income countries reported an increase in high-risk sexual behaviour amongst men who have sex with men when antiretroviral drugs were made extensively accessible in their public health systems[1,2,3]. Although inconclusive, more recent studies exploring heterosexual behaviour amongst non-ART users (that consist of both HIV infected and uninfected people) in low-income settings suggest that access to ART may have led to an increase in risky behaviour[4,5,6]. Nevertheless, perhaps because ART availability in these settings is relatively recent, the scarcity of available research documenting the potential association between ART access and sexual disinhibition is striking. One retrospective study on a clinical cohort established between 2002 and 2009 in rural South-western Uganda suggests that the availability of HIV treatment may have led to an increase in risky sexual behaviour amongst HIV-uninfected people[7]. However, this finding was inconsistent across the chosen behavioural indicators.

The importance of investigating the relationship between ART and population-wide sexual behaviour cannot be underestimated: ART access is going to be scaled up globally[8] over the foreseeable future and an increase in high-risk

sexual conduct due to the false feeling of safety that ART may provide (either because HIV transmission appears to be less likely - since HIV carriers are no longer as visibly distinguishable as they once would have been - or because HIV is no longer perceived to be the death sentence it once was) would radically impact on the epidemiology of the HIV epidemic. But just to be clear: the increased distribution of ART should NOT be scaled down - its benefits are invaluable and making these drugs universally available is the only correct thing to do. However, if research conducted on this topic indicates that it may lead to an increase in high-risk sexual behaviour, then health education and a message of 'prevention' – which worked effectively in some settings over the past couple of decades - needs to be modernized and brought back to the fore to co-exist hand in hand with increased access to ART.

The Lancet highlights that HIV prevention is not simple but successful campaigns include goals that must include "knowledge, stigma reduction, access to services, delay of onset of first intercourse, decrease in number of partners, increases in condom sales or use, and decreases in sharing of contaminated injection equipment"[9]. Indeed, education and effective behavioural change programmes have been attributed to reduced rates of HIV infection in – amongst others – Uganda, Senegal, Brazil, Côte d'Ivoire, Kenya, Malawi, Tanzania, Zimbabwe, Botswana, Burkina Faso, Namibia, Swaziland, Burundi, Haiti, and Rwanda.[9] For instance, one combinatorial preventive program that was adopted across some countries to prevent the sexual transmission of HIV during the early stages of the epidemic was one that promoted three specific behavioural changes (Abstinence, Being faithful, and Condom use) – the ABC program[10]. Uganda's case in point is important to highlight in light of the fact that, in the 1990's, a combination of strategies focusing on abstinence, faithfulness, as well as the widespread distribution of condoms was promoted by the government and resulted in a fall in the annual number of HIV incidence and a drop in HIV prevalence rate from 15% in 1991 to 5% in 2001[11].

The success of such education programs should not be forgotten but rather should evolve to include the advent and accessibility of ART in order to ensure we continue to advance assuredly in our combat against the HIV epidemic.

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