

Debate on the paper by David Vlahov & David D. Celentano

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The double dimension of care and management of injecting drug users living with HIV/AIDS

Since the classic papers by Sir Ronald Ross, the need to consider phenomena from both the individual and collective perspectives at the same time has been key to understanding the dynamic of infectious diseases. Unfortunately, this double dimension of the epidemiology of infectious diseases has been too often disregarded/misinterpreted.

In their paper, Vlahov & Celentano revive the challenge posed by the epidemiology of infectious diseases (specifically HIV/AIDS) in its interface with key ethical aspects informing health policies targeting drug users. There is a double ethical and scientific imperative to be addressed here: to treat individual drug-dependent patients and to assess comprehensively the impact of anti-retroviral therapy on the quality of life, morbidity, and mortality of individual patients; and, at the same time, to evaluate carefully the putative impact of instituting such regimens within the population of drug users at large, their partners, their offspring and the general public.

As time passed, the scope of highly active anti-retroviral therapy (HAART) moved from a small pocket of affluent patients, most of them engaged in programs of expanded access to the then new protease inhibitors and drug combinations, to a relatively larger number of patients. The new therapeutic alternatives then faced their first challenge: instead of carefully controlled phase III clinical trials, treating "real world" patients with less than optimal adherence, inexperienced physicians, deficiencies in the infra-structure of many facilities, etc.

The approval, in 1996, of the Brazilian federal law guaranteeing ample and free access to ARV therapy for people living with HIV/AIDS represented a breakthrough but created a new layer of complexity to the management of people living with HIV/AIDS, worldwide. First of all, how would a developing country be able to

fund and manage such an initiative for a sizeable population of people living with HIV/AIDS, facing serious side-effects and demanding careful monitoring on a continuous basis. Some critics predicted that the Brazilian program was doomed to failure. It was feared by many that such an attempt would be suboptimal and would not only jeopardize individuals but would also have side effects at the ecological level by putatively creating a "Petri dish" where resistant viruses would breed. Although such catastrophic forecasts have not materialized and Brazil has reported adherence and resistance levels comparable to developed countries¹, similar alarms are also occasionally raised by clinicians afraid of initiating HAART for drug users and other disenfranchised populations.

One may note, however, that when HAART moved from the original clinical trials to real life conditions in the developed world, such optimal conditions also did not exist. The introduction of HAART in affluent populations of the developed world was driven, at least in part, by pressures from groups of activists, and favored treatment protocols were established in correspondence with the emergence of formidable challenges in terms of defining monitoring routines and management of serious side-effects.

The paper by Vlahov & Celentano is especially relevant at a time when many different agencies and governments, worldwide, are engaged in a serious effort to scale-up access to ARV therapy in developing countries. Whereas the worst situation in terms of access to therapy is by far the one found in Sub-Saharan Africa, where the injection of illicit drugs is not prevalent (although increasing in some specific settings), the situation is of special concern in Eastern Europe, where a sizeable population of injection drug users (IDUs) has been minimally affected by HIV and other blood-borne and sexually transmitted infections. In Eastern Europe, particularly in Russia and former USSR republics, the fast and extensive spread of HIV and other deadly viruses is framed by a disorganized health system and plagued by shortage of funds, unmotivated staff, and restrictive legislation (which, for instance, forbids the institution of methadone substitution therapies).

Within this context, data obtained from impoverished and marginalized populations living in the USA and other developed countries are vital, not only in terms of managing HIV/AIDS in those very settings but to pave the way of public policies targeting a globalized world, where problems are becoming everyday more inter-related, but demanding responses tailored to local needs and specificities.

A recent paper ² presents a very auspicious finding: the authors found, in a Canadian sample, comparable antiretroviral resistance among HIV-infected patients with and without a history of injection drug use. However, the issue remains controversial and many authors have highlighted the risks associated with suboptimal levels of adherence to HAART and uneven monitoring among IDUs vis-à-vis the eventual emergence of resistance. Data about further dissemination of resistant strains transmitted by IDUs are far from comprehensive but, notwithstanding, have reinforced entrenched prejudices against delivering HAART to such marginalized populations.

While waiting for further studies, it must be emphasized that many practitioners often wrongly understand phenomena at the collective level as the mere sum of individual level empirical data collected in the daily routine of their own clientele. As shown by many mathematical modeling studies of HIV/AIDS or other infectious diseases, some collective phenomena can be counter-intuitive ³ or can explain phenomena observed at the individual level under a different key than usual inferences made from individual level data ⁴. For example, our group recently showed that the recent increases in STDs and risky sexual behavior among the MSM population, following wide scale access to HAART, could partly be explained by a phenomenon that occur at the population level (i.e. renewal of high risk groups due a decrease in morbidity and mortality due to HAART) rather than only due to factors occurring at the individual level, such as treatment optimism.

One must be aware that his/her point of view may be informed by prejudice or subjective interpretation of anecdotal information instead of sound scientific evidence. But above all, ethical questions have a pivotal role here: how to qualify and quantify individual benefits/risks against the background of putative risk/benefit to the community? This questions is important and will also be relevant for all populations if an AIDS vaccine with greater therapeutic than prophylactic benefits is found. In the absence of conclusive data on the impact of a given intervention at both the individual and population level, how should individual practitioners behave? It seems that the worst response is to postpone treatment for patients in need without making a serious attempt to improve the contexts where responses take place (i.e. training staff and integrating psychosocial support into clinical care), to improve referrals, to co-locate treatment alternatives, etc. It is ill-advised to assume that the sociocul-

tural background should be a determinant of the quality of the treatment they should receive instead of aiming for the best possible treatment. Alternatives such as case-management, so far mainly attempted in the context of developed countries (with some small-scale initiatives in developing countries, such as one initiative recently accomplished in Brazil ⁵) have been shown to be very helpful and should be expanded to different contexts.

We think the most adverse and confusing scenario may emerge from a combination of prejudice, lack of insight about the actual dynamics of infectious diseases and a priori distrust of the capacity of both IDUs and health services to address current challenges and to redefine their practices, attitudes and habits.

1. Petersen M, Boily MC, Bastos FI. Assessing HIV resistance in the context of developing countries: Brazil as a case study. *Rev Panam Salud Publica*; in press.
2. Wood E, Hogg RS, Yip B, Dong WWY, Wynhoven B, Mo T, et al. Rates of antiretroviral resistance among HIV-infected patients with and without a history of injection drug use. *AIDS* 2005; 19:1189-96.
3. Boily MC, Bastos FI, Desai K, Masse B. Changes in the transmission dynamics of the HIV epidemic after the wide-scale use of antiretroviral therapy could explain increases in sexually transmitted infections: results from mathematical models. *Sex Transm Dis* 2004; 31:100-13.
4. Boily MC, Godin G, Hogben M, Sherr L, Bastos FI. The impact of the transmission dynamics of the HIV/AIDS epidemic on sexual behaviour: a new hypothesis to explain recent increases in risk-taking behaviour among men who have sex with men. *Med Hypotheses* 2005; 65:215-26.
5. Malta M, Carneiro-da-Cunha C, Kerrigan D, Strathdee AS, Monteiro M, Bastos FI. Case-management of HIV-infected injection drug users: a case study in Rio de Janeiro, Brazil. *Clin Infect Dis* 2003; 37:S386-91.

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The question of technology transfer: how does that apply to Brazilian reality?

The article by Vlahov & Celentano suggests very interesting questions for discussion. For example, the authors make a good point by stressing the importance of drug abuse treatment as a prevention tool for both HIV acquisition and transmission. However, when facing the reality of South America and Brazil, we