

A recent paper <sup>2</sup> 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 <sup>3</sup> or can explain phenomena observed at the individual level under a different key than usual inferences made from individual level data <sup>4</sup>. 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 <sup>5</sup>) 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.

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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

must acknowledge that although “treatment” implicitly assumes a wide array of systems that allow for scaling the proper care according to the level of need of the client, there are no such systems in our environment. There are many potential explanations for this, but one of the most important reasons may be that scarce resources are not being properly distributed, since we seldom base our prevention and treatment choices on hard data. In fact, we struggle between passion and evidence to decide which are the best applications for government money (one such example is the government suggestion to provide “safe injection houses” – a component of harm reduction practices – to help injection drug users (IDUs) properly inject with lower risks of injury by using sterile injection equipments. Though this approach is quite established in developed countries<sup>1,2</sup>, it is assumed that all other potential resources for drug users – including IDUs – are being provided in conjunction with this approach. This is certainly not the case of Brazil, where most parts of this complex infrastructure are missing, from hospital beds to continuous training of treatment and prevention teams. Therefore, advocating proper care for drug users – particularly IDUs – would mean recognizing this fact as one of the major issues that may prevent success.

Another point that must be taken into account is that the authors base most of their comments on IDUs who are mostly heroin users – the typical reality of the Northern hemisphere. Again, this is not the reality of South America, where cocaine is the predominant drug for injection practices among drug users. This complicates the already tricky issues related to approaching IDUs – either through conventional techniques, or through needle exchange programs: cocaine IDUs will inject more often than heroin users due to the much shorter half-life of cocaine when compared to heroin, thus potentializing their risks for HIV infection through exchanging unsterile equipment, as well as performing sex, for continuous drug use<sup>3</sup>. It is reasonable to conclude that the wheel spins faster in such a cycle, therefore complicating approaches for IDUs based on harm reduction strategies that rely of reaching them on the field. The same seems to apply to crack smokers, which are reaching epidemic levels in Brazil<sup>4</sup>.

The authors properly show that it may be difficult to field cohort studies or other prospective designs that include IDUs or intensive drug users. Although the techniques for such design are getting better, generating higher retention

rates, there is a culture of rejection related to drug-using individuals – in particular IDUs and crack smokers – that is imbedded in the public approach to such clients. The Brazilian program of STDs/AIDS has been pushing hard to change this pattern by providing better opportunities reach and retain such groups of clients. However, even when properly retained in field programs, clients cannot find proper treatment slots even if they decide to quit their drug use, due to the “puzzle with missing pieces” that is the current atmosphere of drug treatment in Brazil<sup>5</sup>.

Assuming that – against all odds – we would be able to overcome the above mentioned obstacles, we would have a drug-using client who is HIV positive or has AIDS, willing to submit to a HAART regimen. The problem of adherence would still need to be addressed. Even setting aside the ethical dilemma of drug treatment effectiveness leading to relapse to higher risk behaviors, as mentioned by the authors, we still do not have the appropriate tools to retain clients in hospital-based treatment settings. IDUs and crack smokers tend to shun hospital settings, and we have not developed appropriate methodologies to increase their levels of comfort. We might be better off by developing fast detox approaches – including pharmacotherapy – for cocaine injectors, as well as improving our mechanisms to retain drug users under systematic day hospital or inpatient treatment, thus opening the “windows of opportunity” for preventing HIV infection. This option of technology transfer may be more resilient to environmental aspects such as the ones described in this commentary.

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