DOI: 10.1590/1807-57622015.0038

The reemergence of the Aids epidemic in Brazil: Challenges and perspectives to tackle the disease

Last December, when the World AIDS Day was celebrated, the release of trends of the epidemic in the world[1] and in Brazil[2] by the United Nations and by the Ministry of Health showed contradictions and raised questions. In the opposite direction from that of the world scenario, the Brazilian data revealed that AIDS is far from being controlled and that it has reached its worst indicators since the outbreak of the disease, more than thirty years ago. Since 2011, the barrier of forty thousand new cases per year has been overcome and there are no signs that it will decrease in a short period of time. The number of cases among homosexuals has increased again, on a par with the great concentration of the epidemic in urban centers and with the growth of the male/female ratio, mainly due to the reduction in HIV transmission through shared injecting drug use and to the slowdown in heterosexual transmission. A new generation, born after the mid-1990s, has also begun to present higher incidence rates compared to the ones registered among individuals who started their sexual life right after the outbreak of the epidemic. This epidemiological profile has been assuming, once more, characteristics that are somehow similar to what was observed at the beginning of the 1980s, when the disease started making its first victims and its incidence was strongly concentrated on specific social segments. However, the incidence and mortality rates are more alarming now.

Nevertheless, what mostly reveals the reemergence of the disease in Brazil is the mortality trend. After consecutive years marked by reductions in the rate, the number of deaths and the mortality rate have begun to increase again. In 2013, there were 12,700 cases of deaths caused by the disease, a figure that is similar to that of 15 years before, when the policy of access to antiretroviral drugs was implemented. In the last seven years, the growth of the national mortality rate increased by a little more than 5%, from 5.9% per 100,000 inhabitants in 2006 to 6.2% per 100,000 inhabitants in 2013. In the North, Northeast and South regions, the rates reached figures that were twice as high as those registered in the period before the implementation of the policy of access to antiretroviral drugs, which means a neutralization of all the advances that had been observed in these places.

The resurgence of the AIDS epidemic in Brazil occurs in a moment when the scientific knowledge that has been accumulated in the field brings auspicious prospects for the control of the epidemic in the world. Studies on the effects of antiretroviral drugs used in the daily routine of healthcare services[3] have shown that the life expectancy of people treated at the initial stages of the infection is similar to that of non-infected individuals. This allows us to devise a scenario where death caused by AIDS should be an increasingly rare event. However, the greatest enthusiasm has been produced by studies that reported a reduction of more than 90% in HIV transmission in infected individuals treated with antiretroviral drugs, with total suppression of the virus replication[4] – a protection rate that is higher than that observed in condom distribution programs[5].

Based on this new scenario, mathematical modeling studies[6] have indicated that the diagnosis and universal treatment of infected individuals would potentially eliminate the occurrence of new infections. This stimulated the United Nations[7] to summon the countries to implement, by 2020, ambitious programs to diagnose 90% of people living with HIV, to treat 90% of them with antiretroviral drugs, and to ensure that 90% of the treated people have an undetectable viral load. It is the so-called 90-90-90 goal which, according to the United Nations, might lead to the end of the epidemic in the world by 2030.

Beyond the polemic concerning whether drug therapy strategies to control epidemics can be totally successful - tuberculosis and Hansen's disease continue to be important public health problems, despite the existence of effective treatments to cure and prevent the transmission of the infections - , the United Nations' proposal has triggered the discussion on the healthcare systems' capacity to absorb a large amount of infected people and on the quality of the care that is provided for them.

In Brazil, data from the Ministry of Health[2] about the "treatment continuum" – with the estimate of the number of infected people in the country and the percentages of individuals who know about the diagnosis and are undergoing effective treatment – have revealed a surprising picture: the number of infected individuals who are aware of their diagnosis and are outside the healthcare services or have a detectable viral load (296,000) is approximately twice as high as the number of people (145,000) who are unaware of their diagnosis. Therefore, the policies have a clear difficulty in guaranteeing clinical follow-up and adherence to treatment in a sustainable way over time.

Since the outbreak of the epidemic, back in the 1980s, a network of care provided for infected people has been implemented in Brazil, based on the principles of integrality and interdisciplinarity, and with quality assessments[8] showing relatively satisfactory structures and working processes for significant portions of the healthcare units. However, in recent years, part of this network has been negatively affected due to the underfunding of the *Sistema Único de Saúde* (SUS – Brazil's National Healthcare System) and to the weakening of the Brazilian response to Aids.

The Ministry of Health's recent proposal for strengthening this network by extending the care provided for infected people to the level of primary care raises questions regarding effectiveness. Positive experiences have been observed in services implemented in this level of care; however, assessments have also shown that the worst quality indicators have been presented by the least complex services, implemented in small- and medium-sized

cities and with a reduced number of patients. In addition, problems inherent in this level of care remain unanswered, like the elimination of vertical transmission of HIV and syphilis, the treatment of sexually transmitted diseases (STD), and the universalization of HIV diagnosis.

Furthermore, the Brazilian response to AIDS has contributed to consolidate convictions according to which the success of care strategies is strongly related to policies for the promotion of health and human rights. On the one hand, the emergence of new and effective preventive methods[9], many of which are of biomedical nature, with pre- and post-sexual exposure prophylaxes and male circumcision, together with methods that are traditionally known, like male and female condoms, the use of serology to define sexual agreements and non-penetrative sexual practices, have opened the possibility of amplifying the number of people and situations in which prevention can be practiced. On the other hand, it is clear that structural actions[10] to reduce stigma and discrimination, to promote social inclusion and to eliminate legal barriers are the factors that will produce the control of the incidence and mortality rates in the social groups that are most affected by the epidemic. These groups have always had difficulties to be included in the State's and municipal responses to AIDS[11] and, in recent years, there have been important setbacks of the federal policy concerning this aspect.

In view of all that has been discussed here, it is worrisome that, after years of more positive indicators, the Brazilian response to AIDS has been showing signs of reemergence, especially when the scientific knowledge and the international community have pointed to a more effective control of the epidemic in the world. The answer to this situation must combine successful experiences in the Brazilian response with the opportunities that have been opened by new knowledge produced in the field of AIDS prevention and care.

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References

1. Joint United Nations Programme on HIV/AIDS. Global Report: UNAIDS report on the global AIDS epidemic 2013. Geneve: Word Heath Organization; 2013.

2. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento Nacional de DST, Aids e Hepatites Virais. Boletim Epidemiológico Aids/DST. Brasília (DF): Ministério da Saúde; 2014.

3. Collaboration of Observational HIV Epidemiological Research Europe (COHERE) in EuroCoord, Lewden C, Bouteloup V, De Wit S, Sabin C, Mocroft A, et al. All-cause mortality in treated HIV-infected adults with CD4 500/mm3 compared with the general population: evidence from a large European observational cohort collaboration. Int J Epidemiol. 2012; 41(2):433-45.

4. Donnell D, Baeten JM, Kiarie J, Thomas KK, Stevens W, Cohen CR, et al. Heterosexual HIV-1 transmission after initiation of antiretroviral therapy: a prospective cohort analysis. Lancet. 2010; 375(9731):2092-8.

5. Weller SC, Davis-Beaty K. Condom effectiveness in reducing heterosexual HIV transmission (Review). The Cochrane Collaboration; 2007 [acesso 2014 Abr 14]. Disponível em: http://apps.who.int/rhl/reviews/CD003255.pdf

6. Investigating the impact of treatment on new HIV infection. PLoS Med. 2012; 9(7):1-92.

7. Joint United Nations Programme on HIV/Aids. 90-90-90: an ambitious treatment target to the help end the AIDS epidemic. Geneve: UNAIDS; 2014.

8. Nemes MIB, Alencar TMD, Basso CR, Castanheira ERL, Melchior R, Brito e Alves MTSS, et al. Avaliação de serviços de assistência ambulatorial em aids, Brasil: estudo comparativo 2001/2007. Rev Saude Publica. 2013; 47(1):137-46.

9. Chang LW, Serwadda D, Quinn TC, Wawer MJ, Gray RH, Reynolds SJ. Combination implementation for HIV prevention: moving form clinical trial evidence to population-level effect. Lancet. 2013; 13(1):65-76.

10. Piot P, Bartos M, Larson H, Zewdie D, Mane P. Coming to terms with complexity: a call to action for HIV prevention. Lancet. 2008; 372(9641):845-9.