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## Letter to the Editor

# Epidemiological evolution of vertical HIV transmission in Rondônia, Brazil

Dear Editor,

With the growing number of cases of human immunodeficiency virus (HIV) infection, which is mainly noticed in women of reproductive age, the number of cases of HIV infected newborns has also increased. The main mode of transmission in such cases is vertical, that is, from mother to child during pregnancy, childbirth, or breastfeeding. It has been reported that 64% of the vertical transmission occurs during childbirth and 35% occurs during intrauterine development; in addition, breastfeeding increases the risk of infection from approximately 7% to 22%.<sup>1</sup> Since 1996, Brazil has aimed at controlling vertical HIV transmission and has also listed this as an objective for improved healthcare. It has consequently initiated prevention and awareness campaigns. In 2000, notification of pregnant women with HIV was made mandatory in the systems database.<sup>2</sup> In 2001, the use of antiretroviral drugs was made mandatory for mother from the 14th week of gestation. Since 2002, through the Nascer Project, Brazil has conducted rapid testing for all pregnant women who did not undergo serology during pregnancy.<sup>3</sup> Furthermore, educational programs recommending artificial milk to replace breast milk

were initiated to prevent a possible infection.<sup>4</sup> According to the Ministry of Health, 17,200 pregnant women are infected by HIV annually.<sup>5</sup> Considering this high number, this study aimed at determining the number of cases of vertical HIV transmission in the state of Rondônia, Brazil.

We performed a quantitative epidemiological study of the cases of vertical HIV transmission in Rondônia, Brazil. We analyzed the data kindly provided by the Agency for Sanitary Vigilance of the State of Rondônia (AGEVISA). Data were collected for seropositive individuals who were infected via vertical transmission from January 2000 to July 2012. The variables evaluated were gender, race, year of diagnosis, mother's education level, and case evolution.

A total of 2523 cases were reported during the study period, and the ages of the subjects ranged from 0 to 81 years. Of these, 56 subjects (2.22%) were infected via vertical transmission. Among these, 29 (51.7%) were men and 27 (49.3%) were women (Fig. 1). Among the newborns, 28 were dark (50%), 20 were white (35.7%), 1 was indigenous (1.78%), and 7 were unidentified. Analysis of the level of education of mothers of the newborns who were seropositive for HIV showed that 9 mothers had no education, 8 mothers had 1-3 years of education,

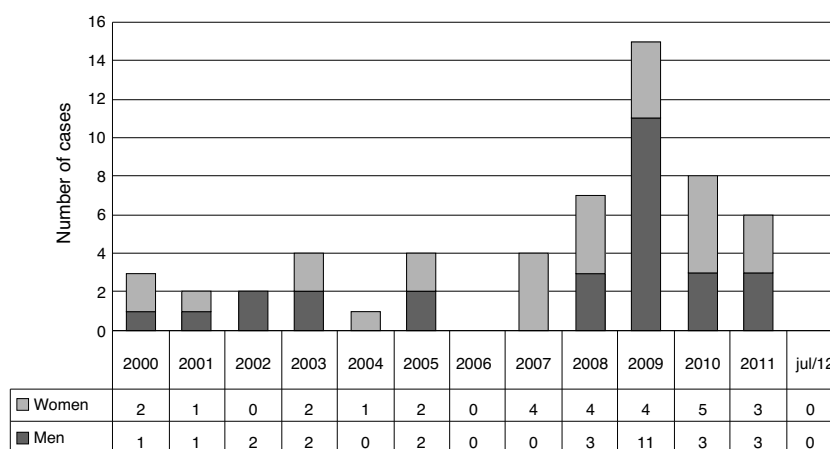


Fig. 1 – Number of cases of vertical HIV transmission diagnosed per year in the state of Rondônia, Brazil. Source: SinanNet and SinanW.

6 mothers had 4–7 years of education, 2 mothers had 8–11 of education, and 3 mothers had more than 12 years of schooling.

Among the cases of HIV-infected individuals who had an associated disease, a high prevalence of certain diseases was noted. These diseases included chronic or recurrent diarrhea in 29 cases; persistent infections and/or recurrent upper airway infections such as pneumonia, abscesses in internal organs, and osteoarticular infections in 12 cases; pneumonia caused by *Pneumocystis carinii* in 11 cases; and oral candidiasis resistant to treatment in 9 cases. During the course of the study, 51 (91%) patients survived, while 5 (9%) patients died.

We conclude that there was an increase in the number of cases of vertical HIV transmission in Rondônia, Brazil, in the recent years, especially since 2008, with a predominance of infection in dark people.

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### Conflict of interest

The authors declare no conflicts of interest.

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