

# Mother-to-child HIV transmission: Snapshot of an epidemic in the Republic of Panama.

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## PURPOSE & METHODOLOGY

The purpose of this epidemiological descriptive study is to provide baseline information, utilizing clinical charts of seropositive women who have been pregnant during 2008 and their offspring to discover the resulting outcomes, and to identify potential avenues for strengthen the health services in low and middle income countries such as the Latin American countries.

Practices documented in the clinical charts were considered as categorical variables. The study measured central tendency, dispersion and statistical significance.

## BACKGROUND

Worldwide HIV is going through a feminization and rejuvenation (UNAIDS, 2012). As more women are living with HIV/AIDS, the risk of vertical transmission is increasing. Despite recent efforts, by 2012, Latin America and the Caribbean (LAC) were ranked the second most affected region in the world. Panama was ranked first in Latin America (along with Guatemala) in HIV/AIDS prevalence (UNAIDS, 2013), with females ages 15-24 twice as affected as men (National Epidemiology Department, 2012). Due to the lack of information about Mother-to-child HIV transmission in the region it was necessary to conduct a baseline clinical chart review to identify the outcomes of the offspring prenatally exposed to HIV in the Republic of Panama.

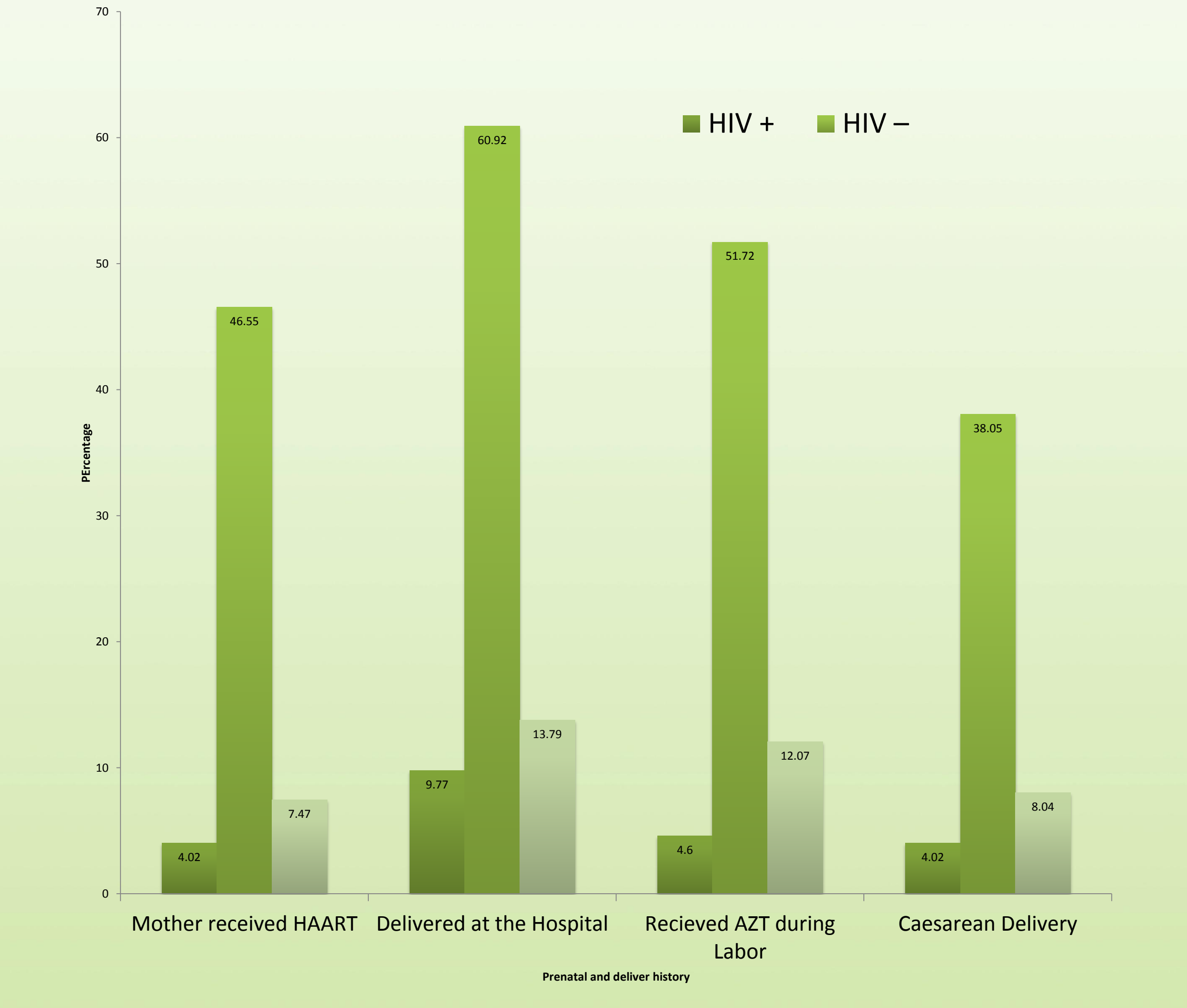
Distribution of interventions by HIV status					
Variable	HIV+	HIV-	Total	X <sup>2</sup>	p value
Did the pregnant women receive HAART?	Yes	7	81	88	
	NO	15	29	44	
	Total	22	110	132	14.43
Did the pregnant women receive AZT during labor?	Yes	8	90	98	
	NO	13	19	32	
	Total	21	109	130	18.77
Did the newborn was delivery through caesarean?	Yes	7	67	74	
	NO	14	41	55	
	Total	21	108	129	5.92
Did the newborn receive oral AZT first six weeks?	Yes	13	104	117	
	NO	8	2	10	
	Total	21	106	127	31.68
Did the newborn was feed with formula?	Yes	7	71	78	
	NO	8	13	21	
	Total	15	84	99	10.91
Did the prenatally exposed children to HIV have siblings HIV positive?	Yes	1	3	4	
	NO	11	74	85	
	Total	12	77	89	0.4762

## RESULTS

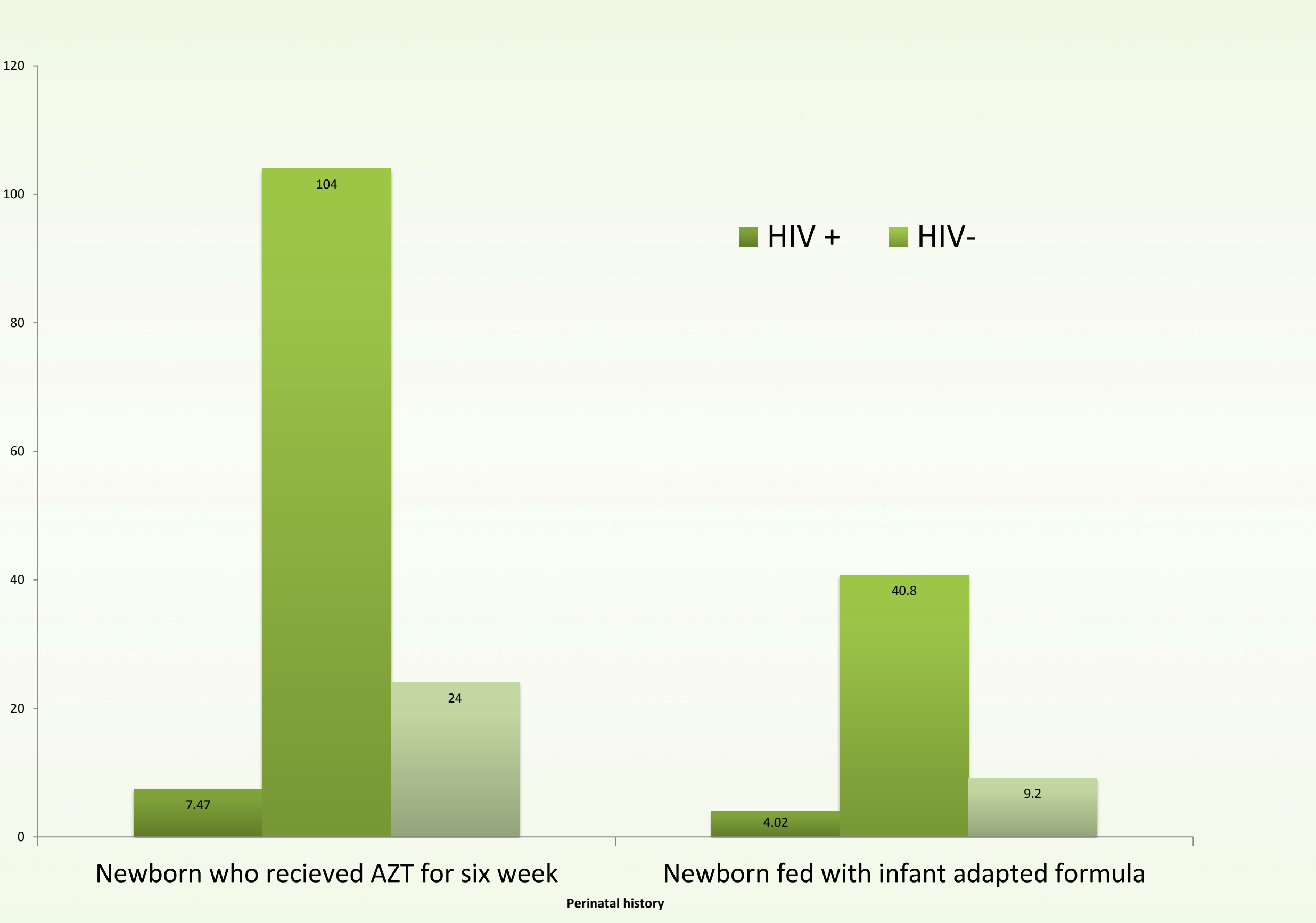
This study found 174 clinical charts of prenatally exposed children in 2008 with most of the cases located in the metropolitan health region, followed by San Miguelito and Colon. During pregnancy, 58.05% of the mothers received HAART; the viral load test result was available in 34.48% of the cases, from those in 41.67% of the cases the viral load count was available prior to delivery, and in 28.33% the count was below 1000 copies. There was a live birth in 83.33% of the pregnancies; 50.58% were born via caesarean; and 68.39% received intravenous zidovudine during labor. 81.03% of the children received oral zidovudine six weeks after birth, and 54.02% were fed with infant-adapted formula exclusively. During the follow-up period 12.64% of children studied were diagnosed as HIV positive and 36.36% of those children had an older seropositive sibling. Variables such as receiving HAART during pregnancy, intravenous zidovudine during labor, being born through caesarean, receiving oral zidovudine the following six weeks after birth, and being fed with infant-adapted formula are statistically significant variables when compared to the dependent variable of final diagnosis of the prenatally exposed children to HIV.

Prenatal and deliver history among HIV pregnant women in the Republic of Panama between January 01, 2008 and December 31, 2008				
	Total % (N)	HIV + % (N)	HIV - % (N)	Missing % (N)
<b>Hospital delivery</b>				
Yes	84.48% (147)	9.77% (17)	60.92% (106)	13.79 (24)
No	4.02% (7)	1.15% (2)	2.30% (4)	0.57% (1)
Missing	11.50% (20)	1.72% (3)	-	9.76% (17)
Total	100% (174)	12.64% (22)	63.22% (110)	24.13% (42)
<b>AZT during labor</b>				
Yes	68.39% (119)	4.60% (8)	51.72% (90)	12.07% (21)
No	20.11% (35)	7.47% (13)	10.92% (19)	1.72% (3)
Missing	11.50% (20)	0.57% (1)	0.57% (1)	10.34% (18)
Total	100% (174)	12.64% (22)	63.22% (110)	24.13% (42)
<b>Method of delivery</b>				
Vaginal delivery	37.36% (65)	8.05% (14)	23.56% (41)	5.75% (10)
Caesarean	50.58% (88)	4.02% (7)	38.05% (67)	8.04% (14)
Missing	12.07% (21)	0.57% (1)	1.15% (2)	10.34% (18)
Total	100% (174)	12.64% (22)	63.22% (110)	24.13% (42)

Prenatal and deliver history among HIV pregnant women in the Republic of Panama between January 01, 2008 and December 31, 2008



Perinatal history of prenatally exposed children to HIV during January 01, 2008 and September 31, 2009



Perinatal history of prenatally exposed children to HIV during January 01, 2008 and September 31, 2009

	Total % (N)	HIV + % (N)	HIV - % (N)	Missing % (N)
<b>AZT during six weeks</b>				
Yes	81.03% (141)	7.47% (13)	59.77% (104)	13.79% (24)
No	6.90% (12)	4.60% (8)	1.15% (2)	1.15% (2)
Missing	12.07% (21)	0.57% (1)	2.30% (4)	9.19% (16)
Total	100% (174)	12.64% (22)	63.22% (110)	24.13% (42)
<b>Feeding history</b>				
Breast-feeding	8.05% (14)	2.87% (5)	4.60% (8)	0.57% (1)
Formula	54.02% (94)	4.02% (7)	40.80% (71)	9.20% (16)
Mixed	6.32% (11)	1.72% (3)	2.87% (5)	1.72% (3)
Missing	31.61% (55)	4.02% (7)	14.94% (26)	12.64% (22)
Total	100% (174)	12.64% (22)	63.22% (110)	24.13% (42)

Source: Clinical charts from antiretroviral therapy clinics reviewed between January and March 2013.

## CONCLUSIONS

The Republic of Panama has made efforts to prevent vertical HIV transmission. The current study shows that selected early interventions are of statistical significance when compared to the final diagnosis of prenatally exposed children to HIV. Such interventions are: receiving HAART during pregnancy, intravenous zidovudine during labor, caesarean section birth, receiving oral zidovudine six weeks after birth, and feeding with infant-adapted formula.

Opportunities for improvement were identified by the study, such as the late start date of prenatal control, availability of viral load results prior to delivery, and determining the delivery method of the pregnant women.

This information is of interest to Ministries of Health or health related policymakers in the region to aid in the prioritization of interventions and draft strategies to achieve the UNAIDS goal of zero HIV-positive children secondary to perinatal exposure and zero new cases of HIV by 2015.

## LIMITATIONS

Clinical charts belonging to women who were living with HIV/AIDS and pregnant in 2008 were hard to reach. Unfortunately, 65.52% of the clinical charts did not report the 2008 pregnancy; therefore variables such as the viral load available prior to delivery and the value of the viral load were missing in 69.54% and 75.29% respectively. The rest of the variables were collected from the clinical charts of children prenatally exposed to HIV in 2008.

## REFERENCES

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