

# Vertical Transmission in Canada: Canadian Perinatal HIV Surveillance Program

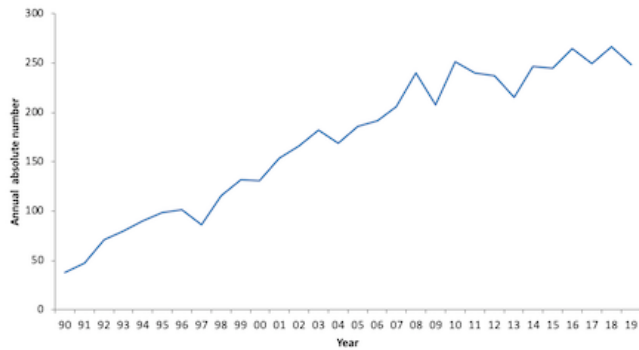
- Joel Singer<sup>1,2</sup>, Laura Sauve<sup>3</sup>, Fatima Kakkar<sup>4,8</sup>, Terry Lee<sup>2</sup>, Jason Brophy<sup>5,6</sup>, Deborah Money<sup>1,3</sup>, Wendy Vaudry<sup>6</sup>, Ariane Alimenti<sup>3</sup>, Isabelle Boucoiran<sup>4,8</sup>, Ari Bitnun<sup>9,10</sup>, Ben Tan<sup>11</sup> and the Canadian Pediatric AIDS Research Group
- 1 UBC, 2 Canadian HIV Trials Network, 3 BC Women's Hospital and Health Centre, 4 Ste Justine Hospital, 5 Children's Hospital of Eastern Ontario, 6 University of Ottawa 7 University of Alberta, 8 Université de Montreal, 9 Hospital for Sick Children, 10 University of Toronto, 11 University of Saskatchewan

# Background and Study Population

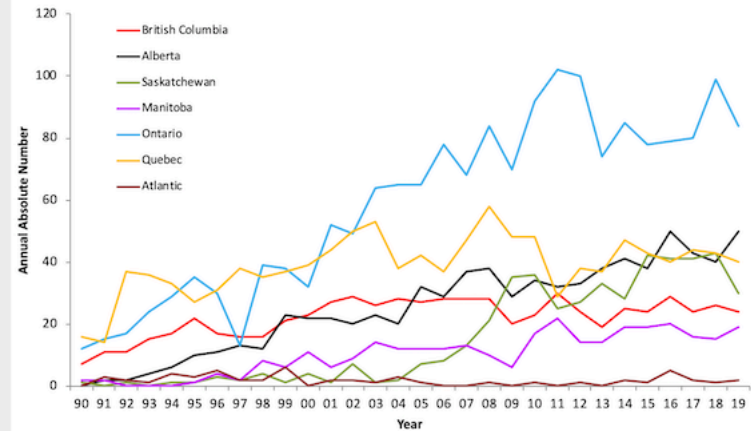
- Initiated in 1990 under the auspices of the Canadian Pediatric AIDS Research Group (CPARG), the CPHSP generates annual national surveillance data regarding the status of infants and children born to women living with HIV in Canada.
- Restricted to infants born in Canada to mothers with documented HIV infection who were referred to one of the participating sites within three months of their birth
- Detection of HIV by virologic assay (NAT / PCR or previously culture or p24Ag) on 2 separate occasions beyond 4 weeks of life or reactive HIV serology at or beyond 18 months.

Overall, the number of mother-infant pairs has continued to increase, plateauing in the last 5 years, with the numbers increasing predominantly in black women, which is reflected by increasing numbers in Ontario. As well, the mode of maternal acquisition is relatively stable and predominantly through heterosexual contact.

Number of mother-infant pairs  
1990-2019

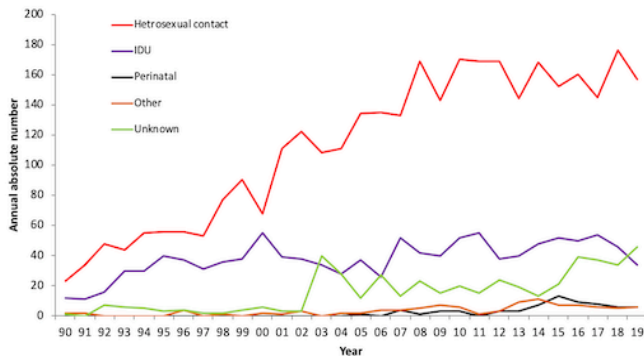


Regional distribution of MIP

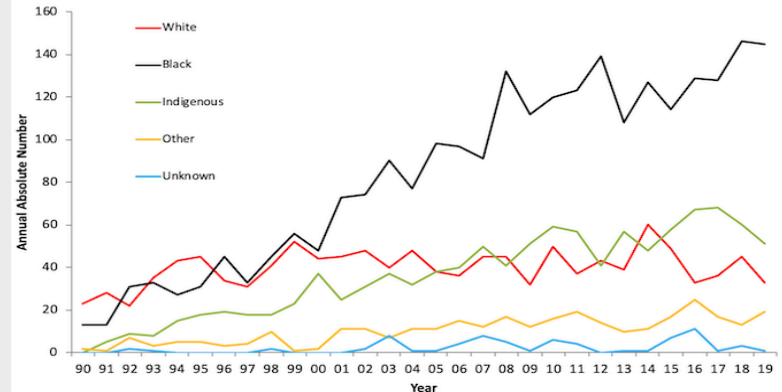


Regina joined since late 2008

Mode of Maternal HIV Acquisition

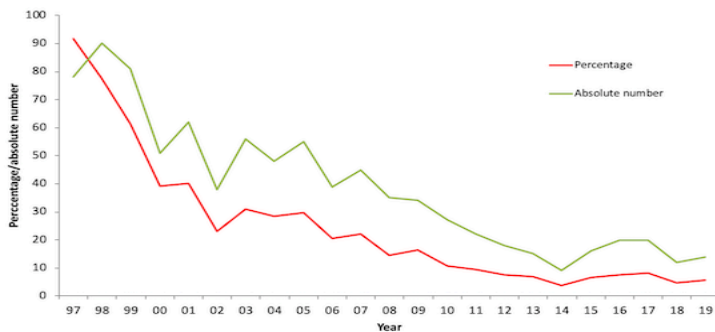


Maternal Race

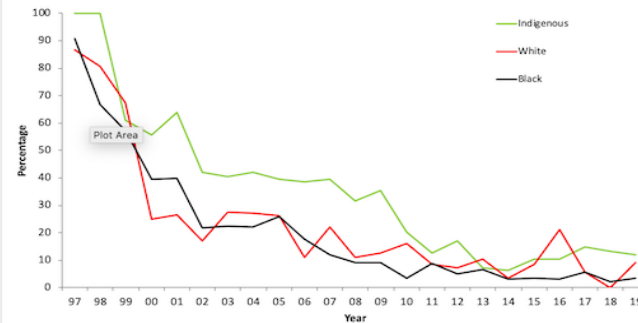


The number and proportion of patients sub-optimally treated (ART or <4 weeks of cART) in 2019 was 14/245 = 5.7%. In a multivariate analysis over the last decade, rates have decreased over time, higher proportions among those infected through IDU compared to heterosexual transmission, lower in Black women and higher in Indigenous women, and lower in British Columbia. There was a single case of vertical transmission in 2019.

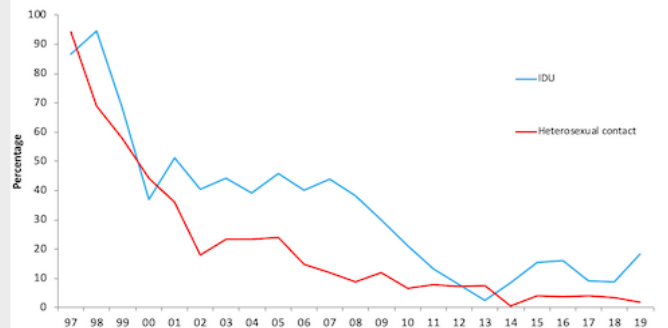
Untreated/sub-optimally treated mothers: 1997-2019



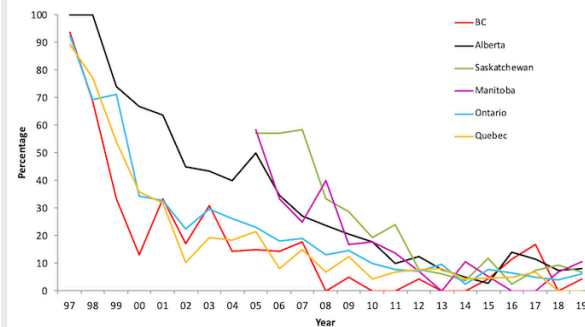
Proportion untreated/sub-optimally treated by Maternal Race



Proportion untreated/sub-optimally treated by Risk Group



Proportion untreated/sub-optimally treated by region



# Conclusions

- In 2019, the number and proportion of sub-optimally treated pregnant women was relatively stable compared with previous years. There was a single infant perinatally infected with HIV
- Indigenous mothers and mothers who were infected with HIV via IDU were more likely to receive sub-optimal treatment. British Columbia mothers had a lower rate, after adjusting for race and maternal risk factor.
- It is important to stay vigilant to ensure proper screening and treatment of HIV+ pregnant women