



Caesarean Sections Among Women Living with HIV: A Population-Based Retrospective Cohort Study

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Most women living with HIV in Canada are of reproductive age (80%)

- Women living with HIV are planning to become pregnant and give birth
- Women on treatment can give birth without passing on HIV to their infants
- Since 2014, SOGC practice guidelines no longer recommend routine CS birth for mothers with HIV

Study Objective

- To describe and assess the maternity care service use of women living with HIV



Retrospective population-level observational study

- Using health administrative databases linked at ICES of births taking place in Ontario between 2006/07 and 2017/18
- Multivariable regression evaluating the role of HIV status on proportion of Caesarean section, adjusting for socio-demographic characteristics, clinical factors, and comorbidities including mental health and substance use disorders
- Research is co-led and co-designed with women with lived experience



Women living with and without HIV have different socio-economic characteristics

Characteristics	HIV Status		Standardized difference	P-value
	Women with HIV n=331 (%)	Women without HIV n=527,015 (%)		
Age (mean, SD)	33.26 ± 5.98	30.75 ± 5.26	0.45	<0.001
Long-term resident of Canada	162 (48.9)	377,779 (71.7)	0.48	<0.001
Rurality - Urban	322 (97.3)	486,592 (92.3)	0.22	<0.001
Income quintile				<0.001
1 (lowest)	153 (46.2)	117,184 (22.2)	0.52	
5 (highest)	24 (7.3)	86,644 (16.4)	0.29	
Gestational diabetes	30 (9.1)	42,654 (8.1)	0.03	0.518
Mental health comorbidities	73 (22.1)	66,788 (12.7)	0.25	<0.001
Substance use disorder	27 (8.2)	8,041 (1.5)	0.31	<0.001
Gestation - Singleton	315 (95.2)	508,933 (96.6)	0.07	0.161
Nulliparous	117 (35.3)	231,328 (43.9)	0.18	<0.001
Labour induction	83 (25.1)	142,548 (27)	0.04	0.06



Living with HIV is only associated with repeat Caesarean section birth

	n(%)	aOR (95%CL)
Caesarean section		
Women without HIV	152,774 (29.0)	1.00 (reference)
Women with HIV	132 (39.9)	1.23 (0.91-1.66)
Primary Caesarean section		
Women without HIV	88,238 (16.7)	1.00 (reference)
Women with HIV	64 (19.3)	1.23 (0.91-1.68)
Repeat Caesarean section		
Women without HIV	64,536 (12.2)	1.00 (reference)
Women with HIV	68 (20.5)	1.45 (1.06-1.98)

Model is adjusted for:

maternal age, parity, gestation, labour induction, previous Caesarean section (uterine scar), gestational diabetes, any mental health comorbidity (including substance use disorders), immigration status, region of origin, rurality, neighbourhood income quintile

Conclusion

- No longer routine Caesarean sections among women living with HIV since implementation of 2014 practice guidelines
- Proportion of repeat Caesarean sections higher among women living with HIV than among women without HIV
- Guidelines for birth after a previous Caesarean section need to be updated to include women living with HIV

