INFANT FEEDING AND HIV

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March 5th 2025

The WCHC HUB
Women-Centred HIV Care

www.wchchub.ca

I acknowledge the land and waters where I live and work the traditional territory of the Annishnabek, Wendat, and Haudenosaunee and is covered by Treaty 13 with Mississaugas of the Credit First Nation.

Overview

- Review Canadian infant feeding and HIV recommendations
- Contrast to international guidelines
- Review the current science about HI V transmission from breast/chestfeeding
- Review available resources

JAMMI
Journal of the Association of Medical Microbiology and Infectious Disease Canada
Journal de l'Association pour la microbiologie médicale et l'infectiologie Canada

ADVANCE ACCESS ARTICLES

Canadian Paediatric and Perinatal HIV/AIDS Research Group consensus recommendations for infant feeding in the HIV context

Sarah Khan MD, MSc[1], Kara K. Tsang PhD[2], Jason Brophy MD, MSc[3], Fatima Kakkar MD, MPH[4], V Logan Kennedy RN[5], Isabelle Boucoiran MD, MSc[6], Mark H. Yudin MD, MSc[7], Deborah Money MD, FRCSC[8], Stanley Read MD, MSc, PhD[9], Ari Bitnun MD, MSc[10] for the Canadian Pediatric and Perinatal AIDS Research Group, the Infectious Disease Committee of the Society of Obstetricians and Gynaecologists of Canada, the Canadian HIV/AIDS and Viral Hepatitis Pharmacists Network and the Association of Medical Microbiology and Infectious Disease Canada

Journal of the Association of Medical Microbiology and Infectious Disease Canada doi:10.3138/jammi-2022-11-03

Eight Main Recommendations (1-4)

1. Exclusive formula feeding is the recommended method for feeding infants born to women living with HIV in Canada
   - Appropriate, trauma-informed, and culturally inclusive supports
   - Comprehensive unbiased counselling
2. Free formula should be made available for all infants born to mothers living with HIV for the first year of life
   - Infant formula is available in most areas of the country at no cost
   - Accessibility concerns
3. All women living with HIV should benefit from detailed multidisciplinary counseling about infant feeding well in advance of delivery by adult HIV, pediatric HIV, and prenatal care providers.
   a. Types of infant feeding including exclusive formula (recommendation), exclusive breastfeeding, and mixed feeding
   b. Current Global Guidelines and the science of HIV transmission through breast milk
   c. Unknown long-term outcomes of ongoing infant exposure to maternal antiretrovirals excreted/ingested in breast milk
   d. Interventions and advice relevant when formula feeding is planned
   e. Interventions and advice relevant for if breastfeeding is planned
4. **As a prerequisite to breastfeeding, healthcare providers should counsel and support women on how to optimize their health and minimize the risk of HIV transmission through breast milk**

Main Recommendations (5: Maternal recommendations)

If a person with HIV chooses to breast/chestfeed

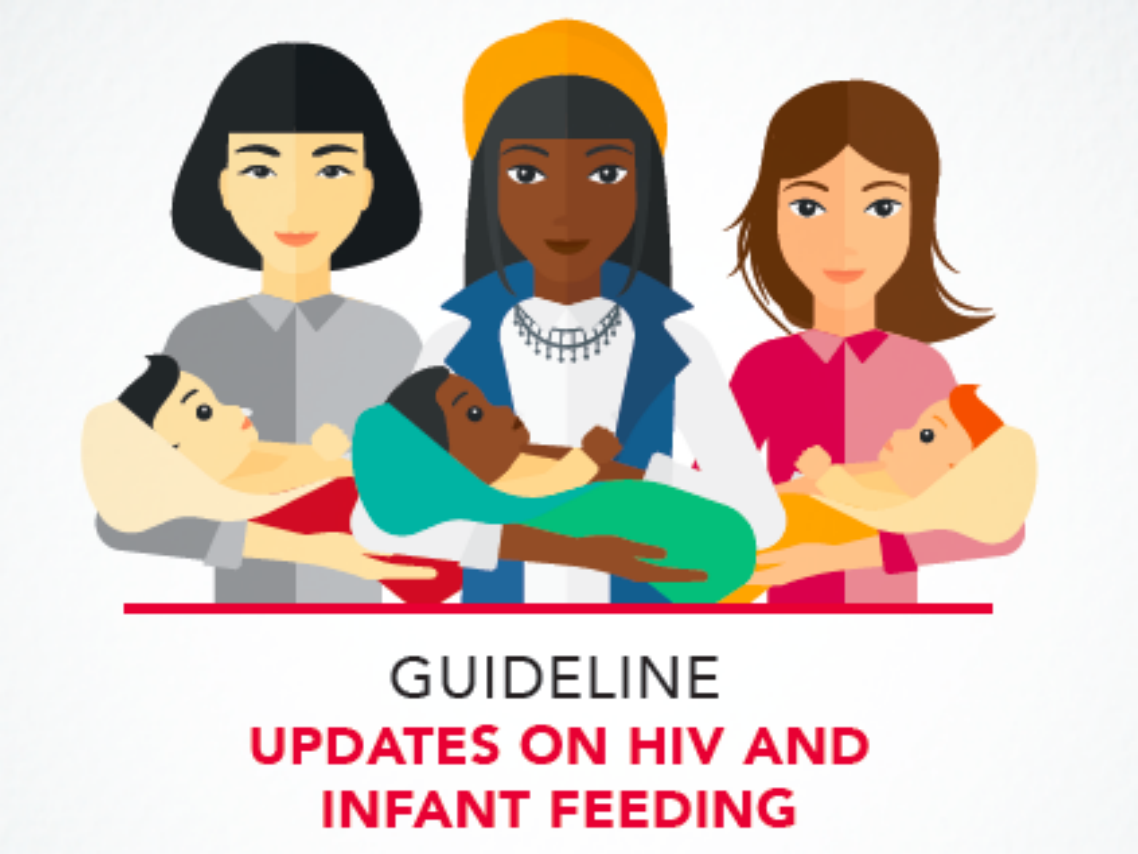
OPTIMAL SCENARIO – adherent to ART, undetectable viral load & ongoing follow-up

5. For women meeting criteria to breastfeed (adherent to treatment), monthly maternal monitoring (including viral load testing), and follow up is recommended until cessation of breastfeeding to ensure ongoing support.
    a. Maintaining adherence and virologic suppression
    b. Maintaining optimal breast health
    c. Total duration of breastfeeding should be minimized
    d. Weaning from breast to bottle feeding can be done by a willing mom and an accepting infant over a period of less than two weeks

Thank you to Dr. Sarah Khan for slides on these recommendations

Contrast to global guideline

WHO HIV & Infant Guideline - 2016



WHO Guideline Recommendations

Recommendation 1: The Duration of Breastfeeding by Mothers living with HIV

- Mothers living with HIV **should breastfeed for at least 12 months** and may continue breastfeeding for up to 24 months or longer (similar to the general population) while being fully supported for ART adherence (see the WHO consolidated guidelines on ARV drugs for interventions to optimize adherence).
- In settings where health services provide and support lifelong ART, including adherence counselling, and promote and support breastfeeding among women living with HIV, the duration of breastfeeding should not be restricted.

WHO guidelines are mostly written for low- and mid-income countries
But technically – for the entire world

Updated US DHHS Guidelines Perinatal Guideline - changes on Infant Feeding – on January 31st 2023

Individuals with HIV **on ART with a consistently suppressed viral load during pregnancy (at a minimum during the third trimester)** and at the time of delivery should be counseled on the options of formula feeding, banked donor milk, or breastfeeding

- The infant feeding options that eliminate the risk of HIV transmission are formula and pasteurized donor human milk
- Fully suppressive ART during pregnancy and breastfeeding decreases breastfeeding transmission risk to less than 1%, but not zero.

For people with HIV who are **not on ART and/or do not have a suppressed viral load at delivery**, replacement feeding with formula or banked pasteurized donor human milk is recommended to eliminate the risk of HIV transmission.

Thank you to Dr. Judy Levison

HIV & Infant Feeding Guidelines in Other Countries

- **Switzerland** – **Successful implementation of new Swiss recommendations on breastfeeding of infants born to women living with HIV.** Crisinel et al. April 2023
  - These guidelines advise to support mothers with well-controlled HIV and a strong wish to breastfeed their infants following interdisciplinary discussion (with a pediatrician, an infectious diseases specialist, and an obstetrician) of risks and benefits. Breastfeeding is supported in women with 1) complete adherence to cART with a suppressed HIV pVL, 2) shared decision- making process and 3) close follow-up postpartum.

- **UK** - **Interim BHIVA position statement on HIV and mixed infant feeding** - Publication date: December 2022 Reviewed; December 2024
  - Since 2010 it has been BHIVA's position that women/birthing parents who are virologically suppressed on ART with good adherence during pregnancy and who choose to breast/chestfeed should be supported to do so, if they: 1) Have been on ART for >10 weeks; 2) Have two documented HIV viral loads <50 HIV RNA copies/mL during pregnancy at least 4 weeks apart AND 3) Have an HIV viral load <50 HIV RNA copies/mL at >36 weeks.

KNOWN AS "OPTIMAL SCENARIO"

CMAJ Commentary

Commentary

Canadian guidance should present formula and breast- or chestfeeding as equivalent options for parents with virally suppressed HIV

Mona Loutfy MD MPH, V. Logan Kennedy RN MN

■ Cite as: *CMAJ* 2025 January 13;197:E15-6. doi: 10.1503/cmaj.240441

Canadian guidance still recommends formula feeding for all infants of birthing parents with HIV.[1] However, evidence supports that the risk of perinatal HIV transmission from breast- or chestfeeding is very low (likely < 0.08%–16%) when a parent with HIV is on antiretroviral therapy (ART), virally suppressed, and under the care of a clinician.[2] This low risk, combined with the benefits of human milk and breast- or chestfeeding, means that Canadian guidance should be changed to present breast- or chestfeeding as an option equal to formula feeding, using a supportive shared-care and informed decision-making process. This would bring Canadian guidance in line with that in other high-income countries and that of the World Health Organization.[3–6]

A 2017 systematic review using data from low- and middle-income countries calculated the perinatal HIV transmission risk to be about 1% at 6 months and 2% at 12 months from breast- or chestfeeding people, most of whom were taking ART.[7] However,

Key points

- The risk of perinatal HIV transmission from breast- or chestfeeding has been shown to be very low (likely < 0.08%–0.16%) when a person with HIV is on antiretroviral therapy, virally suppressed, and under the care of a clinician.
- Breast- or chestfeeding by such parents has clinical equipoise with formula feeding, considering the benefits of human milk to infants.
- Infant feeding recommendations in some high-income countries have changed from promoting solely formula feeding to presenting formula and breast- or chestfeeding as equivalent options for parents whose HIV is suppressed.
- Canadian guidance should offer formula and breast- or chestfeeding as equivalent options, using a supportive shared-care and informed decision-making process.

Determining risk of HIV breastmilk transmission – PROMISE TRIAL - 2018

- Total N = 2392 within 6-14 days after delivery – ALL BREASTFEEDING
  - 1220 - Maternal ART (AZT/3TC + LPV/r BID or TDF/FTC + LPV/r BID) vs.
  - 1221 - Infant ARV (NVP)

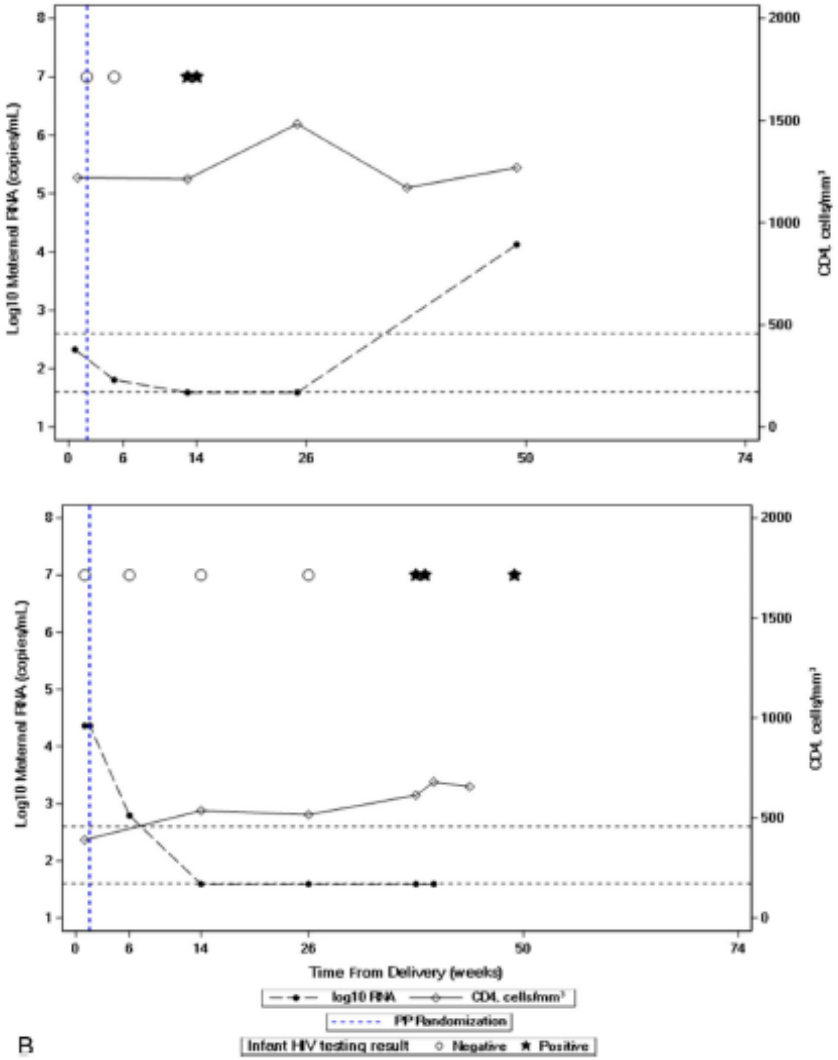
  - OUTCOME – TRANSMISSION FROM BREASTFEEDING

  ➢OVERALL RESULTS - viral load response not taken into consideration OR ARM
    - 0.3% (95% CI 0.1–0.8%) at 6 months a
    - 0.7% (95% CI 0.3–1.4%) at 12 months

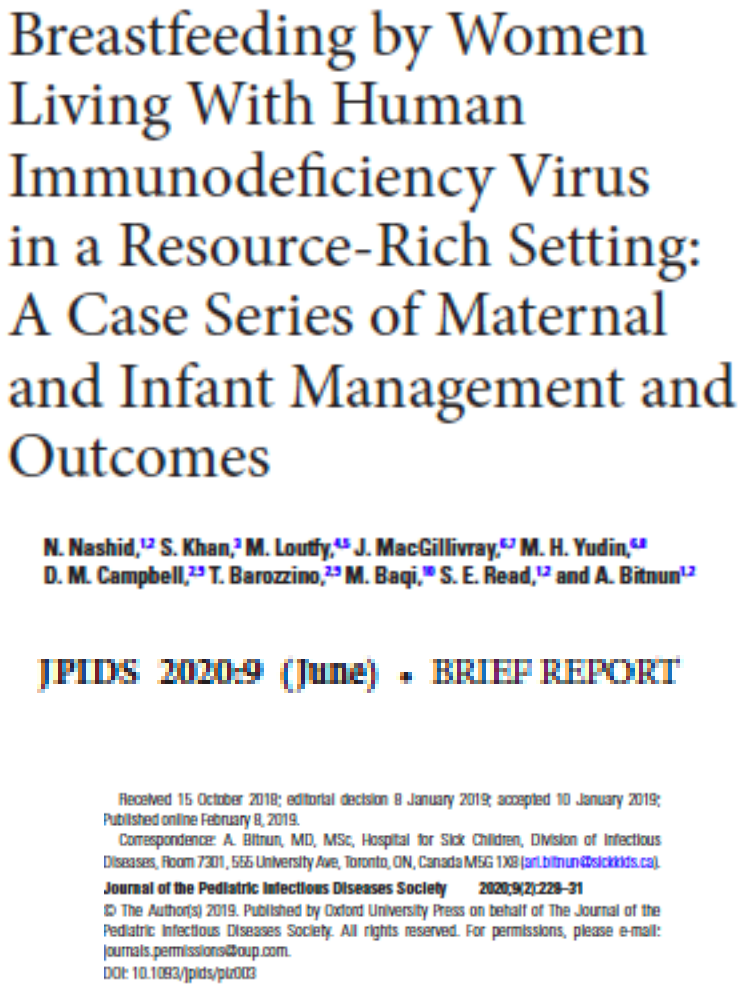
  ➢2 infants in the maternal ARV arm acquired HIV despite maternal plasma VL being non-detected (i.e., <40 copies/ml) (0.16%)

PROMISE TRIAL – 2 CASES

FIGURE 1. Maternal plasma HIV-1 viral load and infant NAT testing of 2 infants with maternal HIV-1 viral load nondetected or detected but less than 40 copies/mL before positive results for infant HIV-1 NAT testing. Dashed lines show maternal HIV-1 viral load results. Solid lines show maternal CD4 cell count. Open circles represent negative results for infant HIV-1 NATs, and black stars represent positive results for infant HIV-1 NAT. full color



Toronto Case Series – first 3 infants breastfed in high-income countries in literature



Breastfeeding by Women Living With Human Immunodeficiency Virus in a Resource-Rich Setting: A Case Series of Maternal and Infant Management and Outcomes

N. Nashid,[1,2] S. Khan,[3] M. Loutfy,[4,5] J. MacGillivray,[6,7] M. H. Yudin,[6,8] D. M. Campbell,[2,3] T. Barozzino,[2,3] M. Baqi,[10] S. E. Read,[1,2] and A. Bitnun[1,2]

JPIDS 2020;9 (June) • BRIEF REPORT

Received 15 October 2018; editorial decision 8 January 2019; accepted 10 January 2019; Published online February 8, 2019.

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Journal of the Pediatric Infectious Diseases Society 2020;9(2):229–31

DOI: 10.1093/jpids/piz003

Journal of the Pediatric Infectious Diseases Society

BRIEF REPORT

- 2 women with HIV – breastfed 3 infants (1 singleton and 1 set of twins) in 2017 & 2018 in GTA supported by maternal and pediatric ID
- Mother 1 – delivered at 41w – breastfed X 6 weeks; infant given AZT/3TC/NVP – no transmission
- Mother 2 – delivered at 31 weeks gestation – mixed breastfed twins from week 6 – 12 weeks – infants first given AZT then given AZT/3TC/NVP X 15 weeks – no transmission

Published reports

Women with HIV breastfeeding in high-income countries

Appendix: Case reports of infants breast/chestfed by people living with HIV in high-income countries reporting infant HIV PCR results

Country	Authors	Year	Number of infants	Infant HIV PCR results
Canada	Nashid et al.[1]	2020	3	All negative*
Belgium	Bansaccal et al.[2]	2020	2	All negative
USA	Yusuf et al.[3]	2022	10	All negative*
Germany	Weiss et al.[4]	2022	30[$]	All negative
Italy	Prestileo et al.[5]	2022	13	All negative
USA	Koay et al.[6]	2022	8	All negative*
Switzerland	Crisinel et al.[7]	2023	25	24 negative; 1 pending
USA + Canada	Levinson et al.[8]	2023	72[%]	68 negative; 4 LTFU
United Kingdom	Francis et al.[9]	2023	289; 255 with infant HIV PCR results^	255 negative; 18 pending; 16 LTFU
Global[&]			431	392 negative 19 pending 20 LTFU

CATIE VIDEO

https://www.youtube.com/watch?v=31e_P_jy5GY&ab_channel=CATIE

I still counsel saying that
“Exclusive Formula Feeding is what is recommended in Canada”

“If you want to breastfeed, it will be fully supported”

”How do you feel about that?”

Dr. Mona Loutfy: HIV transmission and breastfeeding in Canada

4.8K views • 5 years ago

CATIE

Read more perspectives on HIV transmission and breastfeeding in Canada: Pregnancy and infant feeding: Can we say U=U ...

CC

A step by step process on how we can support mothers living with HIV

MARCH 11, 2019 • BY DR. MONA LOUTFY AND DR. SEAN (ARI) BITNUN

Our team in Toronto has supported four mothers living with HIV who wanted to breastfeed while on effective treatment with fully suppressed viral load. We have to say, though, it wasn't easy! But we'll walk you through the steps we followed, which can be used by other healthcare and service providers.

Step 1

First, the topic of infant feeding should be brought up with all pregnant women living with HIV early on in their pregnancy. We advise pregnant women that the Canadian recommendation is for exclusive formula feeding, as this is the only option with a zero risk of transmission. Healthcare providers should ask expectant mothers how they feel about not breastfeeding and let them know that there is support for them if they need it. For example, CATIE and the Teresa group have an excellent booklet on the topic: *Is Formula Good For My Baby?* It's important for mothers to know that they can still bond with their baby if they formula feed. However, if mothers still want to breastfeed, we then move on to step two.

Step 2

The adult infectious diseases specialist books a session with the pregnant mother living with HIV, with or without their partner, to carry out counselling and provide them with the latest information on breastfeeding and HIV. In our counselling, we discuss how guidelines around the world may appear contradictory and explain why. We also review the latest research on HIV transmission risk through breastfeeding, although the research has its limitations. It is hard to know the exact risk of transmission but we do know that the risk of HIV from breastfeeding among women on treatment who are adherent is probably very small, but we cannot say zero. If she understands the risks and limitations of the research and still wants to breastfeed, our team feels that it is our ethical responsibility and position to support her. Our advice to her is to be fully adherent to her treatment regimen, both during pregnancy and afterwards while breastfeeding. We let her know that in the postpartum period, there will be monthly viral load testing and monthly discussions on how she is doing.

We also tell her that the initial colostrum (and maybe the first few weeks, or months of breastfeeding) can be the most important for the baby, and that she should consider limiting the breastfeeding to one, three or six months maximum to reduce the risk of HIV transmission.

We then refer her to the pediatric infectious diseases specialist, while she's pregnant, for further counselling. This brings us to step three.

Step 3

She sees the pediatric infectious diseases specialist for counselling while pregnant. We again stress that the Canadian recommendation is exclusive formula feeding. If she continues to assert to want to breastfeed, we have to be very kind to patients and support them. Once the baby is born, we perform a baseline HIV PCR test and initiate a post-exposure prophylaxis (PEP) regimen, usually consisting of triple antiretroviral therapy, including AZT, 3TC and nevirapine. The baby is then monitored at one week, two weeks and four weeks post-delivery and then on a monthly basis. Monthly testing for HIV is done on the baby while breastfeeding and for several months after breastfeeding is stopped. The antiretroviral medications are discontinued two to four weeks after breastfeeding has stopped, if the baby's HIV tests are negative to that point.

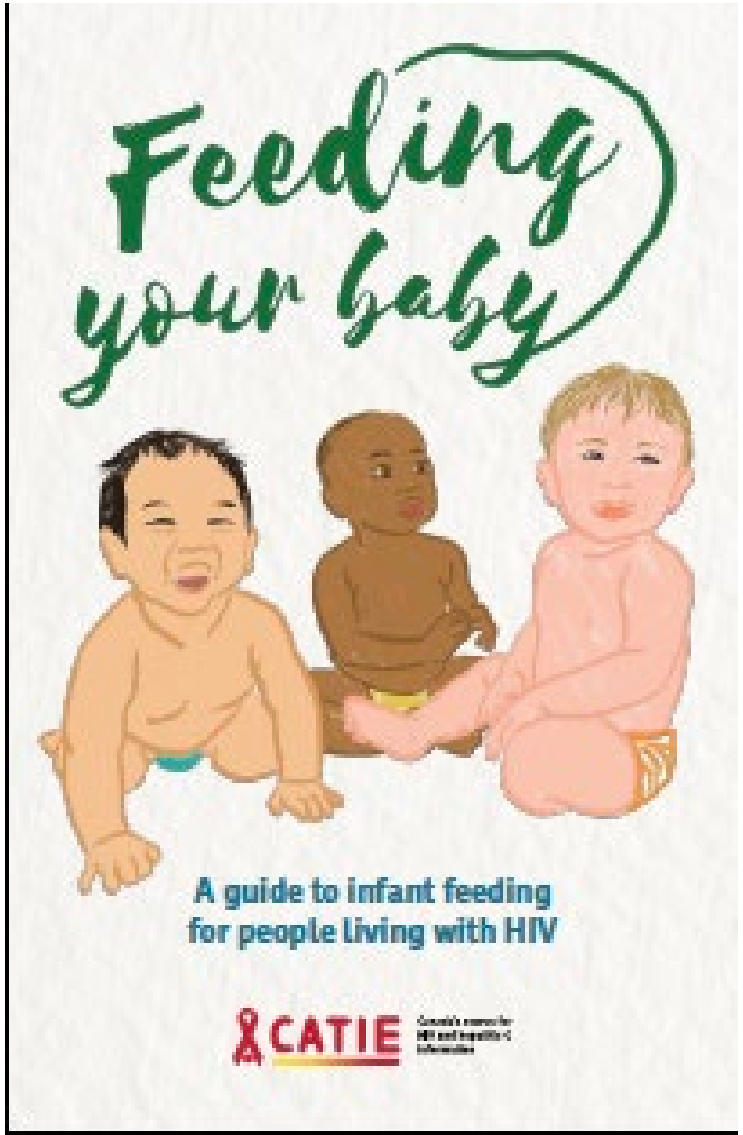
Another important medical fact to consider is that if the mother develops mastitis, it increases the white blood cells in the breast tissue, which theoretically could lead to an increased risk of transmission. It is unknown what to do if a mother living with HIV develops mastitis. The different options are that she completely stops breastfeeding at that time, or she stops breastfeeding and pumps until the mastitis is treated and discards that breastmilk. In both cases, she should be given antibiotics to treat the mastitis, as well as treating it locally.

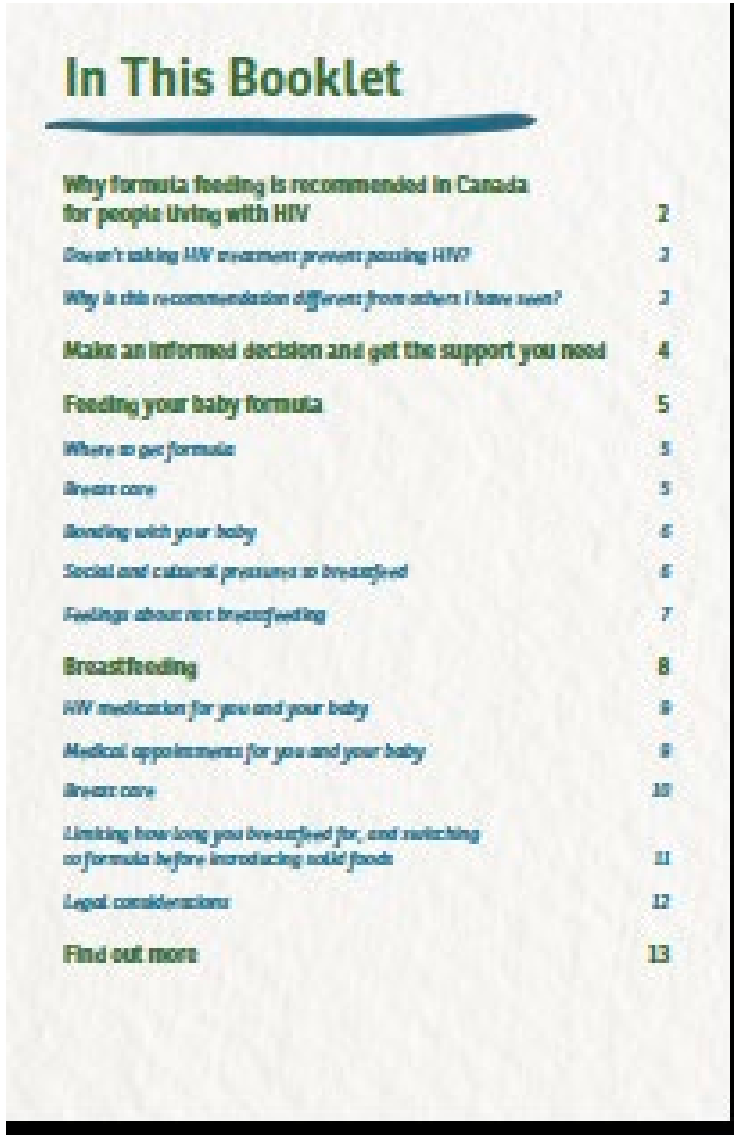
It is also important to be prepared for challenges, as breastfeeding while HIV positive is relatively new to Canada. Some of the challenges that we have seen include:

- Informing all the hospital nurses, physicians and those in the maternity ward that breastfeeding while HIV positive is acceptable based on the WHO guideline, prior to the mother being admitted. All of the healthcare providers need to know that although breastfeeding is not the preferred option in the Canadian context, if the mother chooses to do so while on effective treatment, there is no justification to inform child protections services;
- Difficulty managing multiple visits to the hospital for the mother in a busy postpartum period, especially if the mother is a single mother; and
- Discrimination from care providers and other community members if they know she is breastfeeding.

https://blog.catie.ca/2019/03/11/a-step-by-step-process-on-how-we-can-support-mothers-living-with-hiv/

AVAILABLE RESOURCES





https://www.catie.ca/feeding-your-baby

THANK YOU & CONTACT

Thank you for your interest !!!

The WCHC HUB
Women-Centred HIV Care

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