



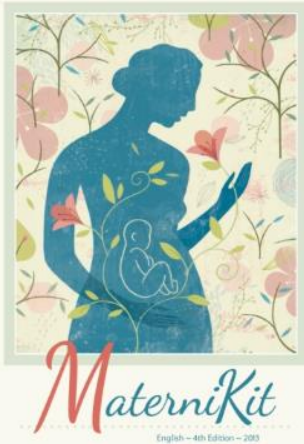
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# **Pregnancy and HIV – Reviewing the Vertical Transmission Risks**

2015 OCN Education Day

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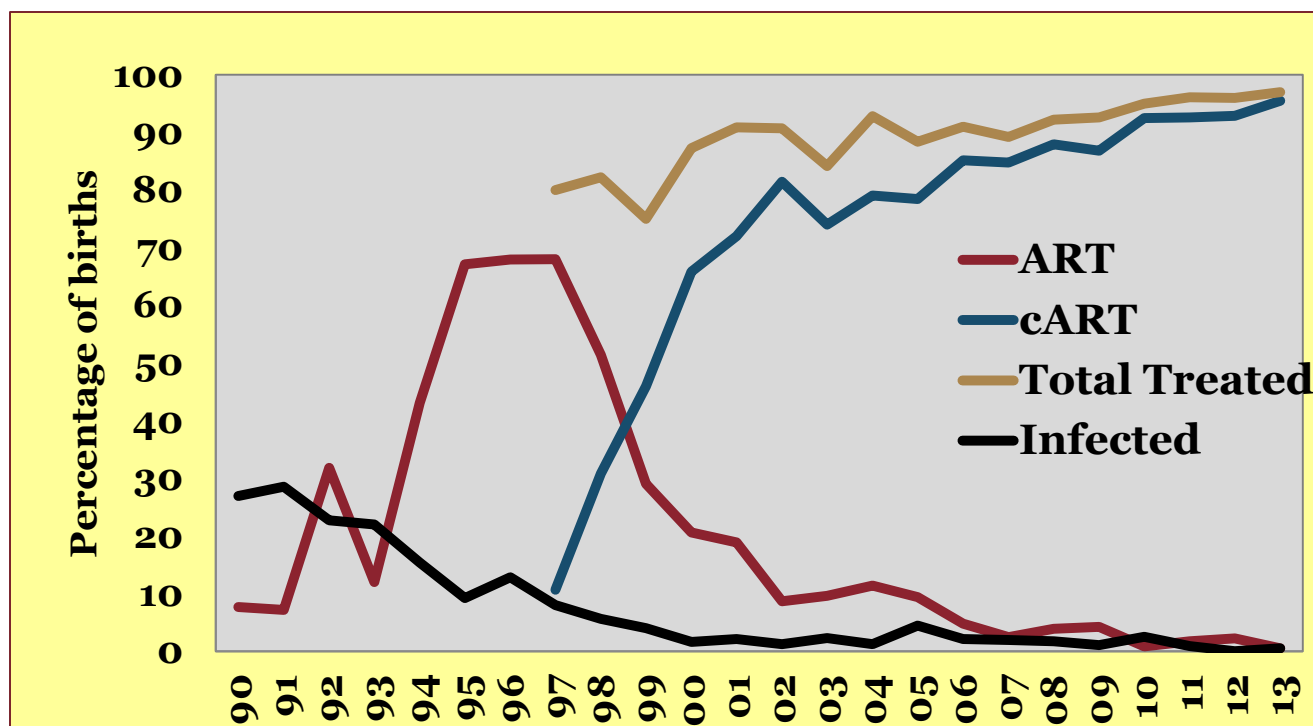


## **This Presentation will:**

Review factors to consider  
when counseling/supporting  
clients regarding pregnancy  
and vertical transmission risks

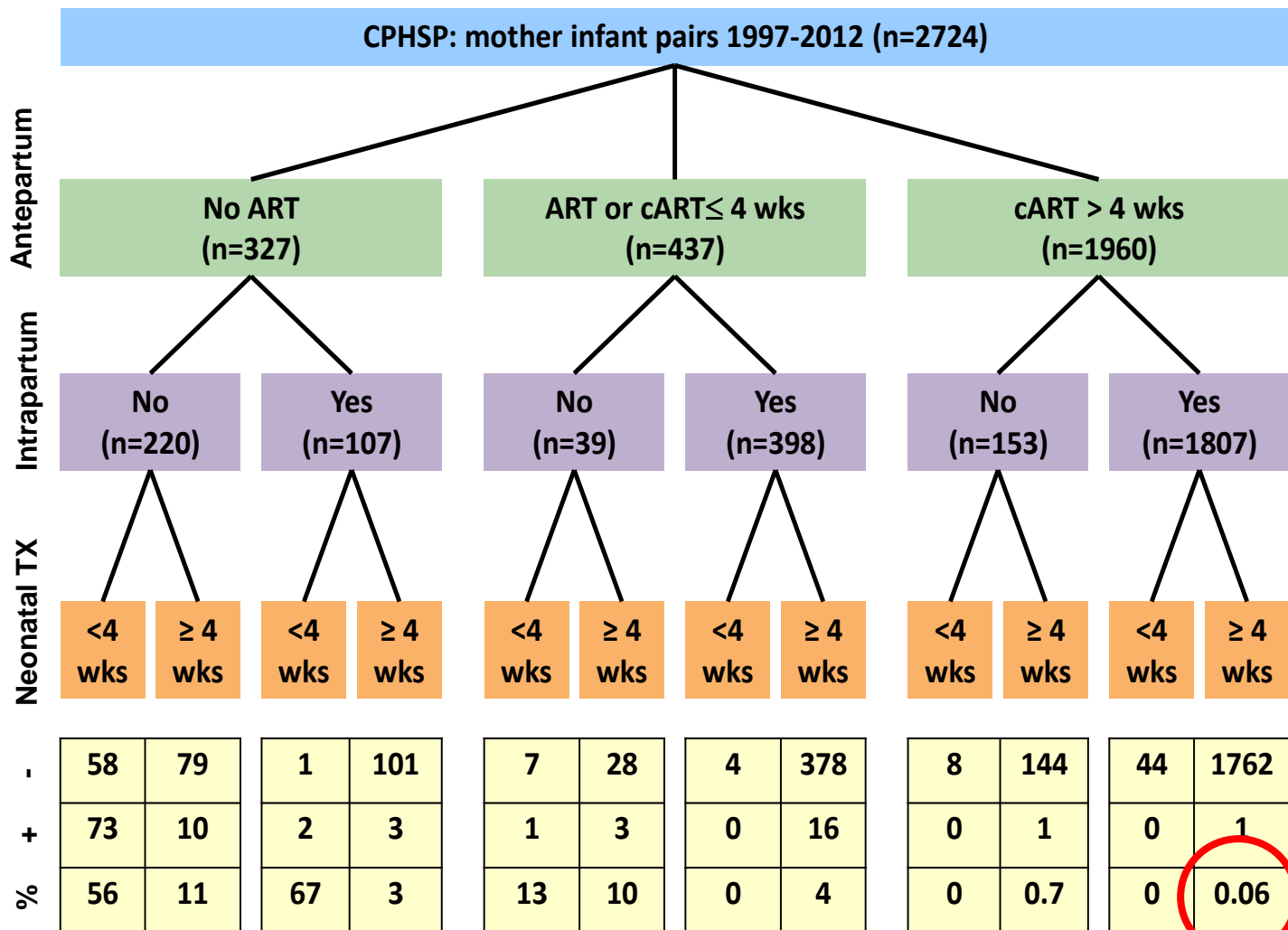


# Vertical Transmission Rate and Annual Proportion of Mothers Receiving ART/HAART in Pregnancy (1990-2013)



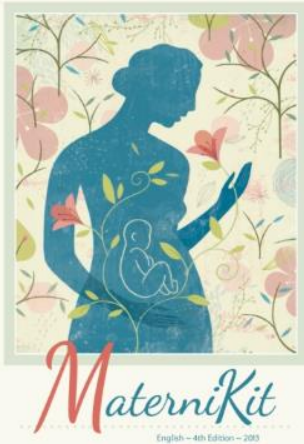


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Overall in Canada, 0.4% transmission rate



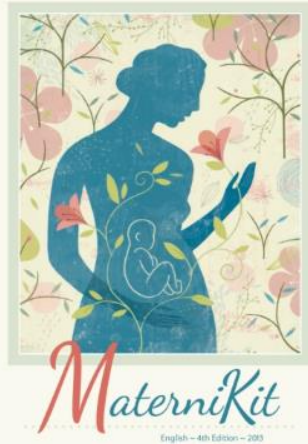


# Risk Factors for Transmission

## 1. Maternal Factors

- **SINGLE MOST RELEVANT: Is she optimally suppressed?**
  - High viral load; especially acute seroconversion
  - Late HIV disease
  - Low CD4 count
  - Maternal injection drug use
  - Other infections: Hepatitis C, CMV
  - Presence of STIs
    - GC & chlamydia
    - Ulcerative ds: HSV & Syphilis



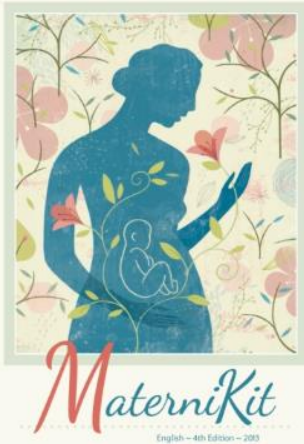


# Transmission with VL < 500 copies/mL

A Case-Control Study Nested in the French Perinatal Cohort

Tubiana *CID* 2010; 50(4): 585-96.

- Duration of ART/early control of plasma VL was **ONLY** factor independently correlated with vertical transmission
- Conclusion: “Early and sustained control of viral load is associated with a decreasing residual risk of MTCT of HIV-1”.



# Missed opportunities for PVT in Canada

- Suboptimal management in 109/110 vertical transmission cases 1997 through 2012
- Vertical transmission rate according to timing of maternal cART initiation
  - 0.1% if maternal cART >4 weeks
  - 4.6% if maternal cART  $\leq$  4 weeks



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# Risk Factors for Transmission

## 2. Obstetrical factors

Antepartum

- No/limited prenatal care

Intrapartum

- Rupture of membranes > 4 hrs, if detectable VL\*
- Chorioamnionitis
- Vaginal delivery if VL > 50 copies/mL
- Invasive procedure

Postpartum

- Breastfeeding





# Methods to Reduce Transmission

## 1. Prepartum (preconception)

- Testing

## 2. Antepartum

- Testing
- Antiretroviral therapy
- Routine prenatal care
- Specialized prenatal care

## 3. Intrapartum

- Antiretroviral therapy
- Obstetrical practices

## 4. Postpartum

- Infant feeding
- Antiretroviral therapy

# What Tools are Available?



1. The 2013 MaterniKit
2. Canadian HIV Pregnancy Planning Guidelines
3. CATIE Resources
4. Centers for Disease Control and Prevention. U.S. Public Health Service Task Force

Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States.

—March 28, 2014



# Summary of what is new in DHHS Guidelines - 2014

- A greater focus on prenatal counseling for all HIV-positive women of reproductive potential
- Discussion of PrEP in serodiscordant couples where positive partner is fully suppressed
  - No data on the utility of this
- New NRTIs added for ARV-naïve women
- Preferred PIs remain the same (naïve)
  - Ritonavir boosted atazanavir (Reyataz) added in the last iteration
- Preferred NNRTI for ARV-naïve women now efavirenz after 8 weeks gestation





# Summary of what was new in DHHS Guidelines - 2012

- If an HIV+ woman becomes pregnant on ARVs – do not change ARVs if safe
  - More harm from changing; possibility of nausea with new regimen; risk of stopping
  - Even Sustiva (e.g. Atripla) can continue; only said not to use in first 5-6 weeks of gestation
- If woman presents late in pregnancy (i.e. 3<sup>rd</sup> trimester) or with very high viral load, add Raltegravir to regimen
  - Commonly use CBV or Truvada with Kaletra + Raltegravir
- Discussion and changes to use of intravenous (IV) zidovudine during labor and maternal viral load
- Revised neonatal dosing and treatment options



# MaterniKit

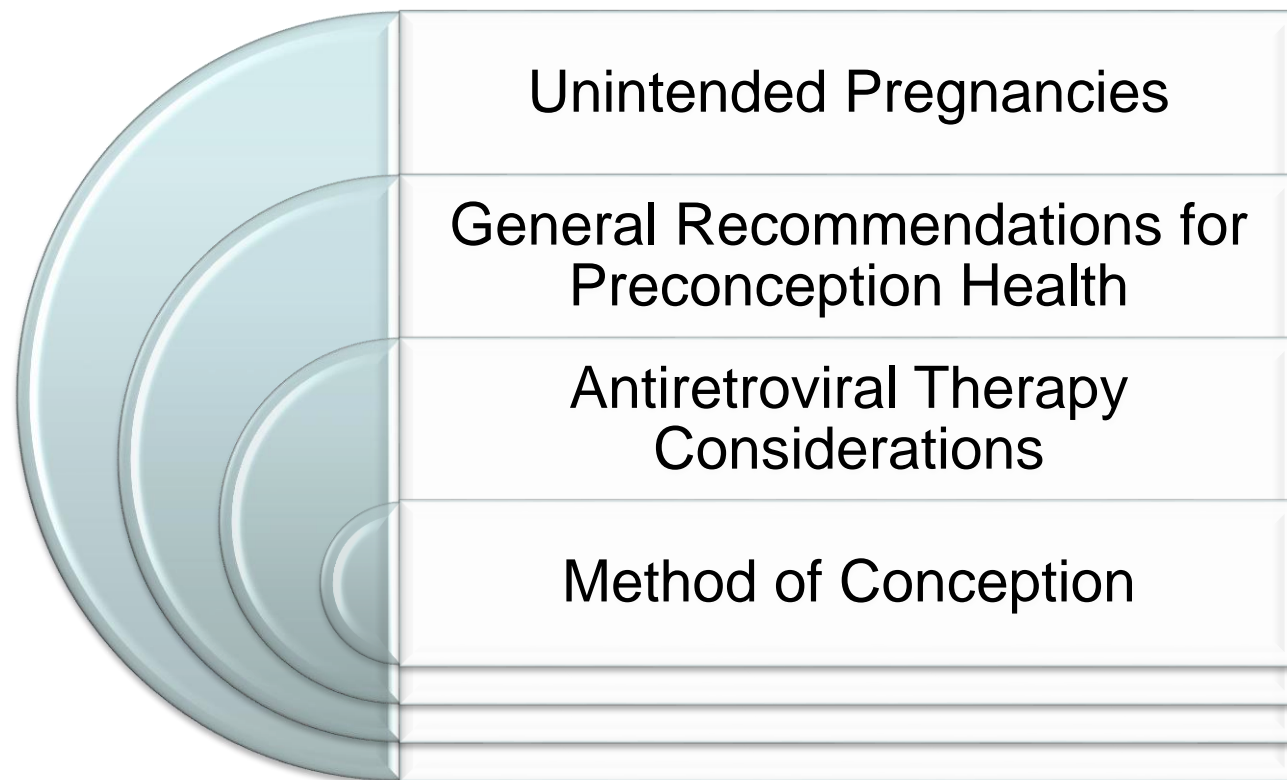
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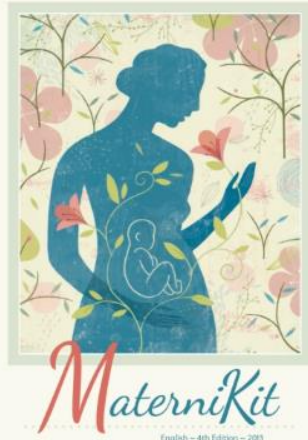




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# Issues in Preconception Period





# Recommendations for Antepartum Care

## Specific Antiretroviral Considerations

- If already on cART and optimally suppression DO NOT CHANGE
- If a woman conceives while on efavirenz (Sustiva, Atripla) counsel regarding risk
- Decisions for treatment naïve or unsuppressed women
- Refer to DHHS for most up to date guidelines and dosing recommendations



# Example Intrapartum Scenario: Very Low Risk

On cART, *undetectable* close to delivery

IV zidovudine  
according to  
protocol\*

Continue on  
cART during  
labour

Initiate PO  
zidovudine x 6  
weeks

Proceed with vaginal  
delivery reserving  
caesarean for  
obstetrical indications



# Example Intrapartum Scenario: High Risk

*On cART, viral load greater than  
or equal to 1000*

Routine Cesarean section\* at 38  
weeks

Initiate PO  
zidovudine x 6  
weeks

IV zidovudine  
according to  
protocol\*

Continue on  
cART in  
hospital

Consult with  
Peds ID to  
consider cART

\* Consideration for mode of delivery may differ with SROM



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# Obstetrical Care Summary

- Counsel regarding risk and benefit of elective cesarean section BEFORE labour/SROM
- Consider VL testing upon admission
- **Ensure continuation of routine ARVs while in hospital**
- Avoid invasive procedures to reduce risk of transmission
- Infant feeding recommendation in Canada remains exclusive formula feeding



# Canadian HIV Pregnancy Planning Guidelines

## SOGC CLINICAL PRACTICE GUIDELINE

No. 278, June 2012

## Canadian HIV Pregnancy Planning Guidelines

These guidelines have been written and reviewed by the Canadian HIV Pregnancy Planning Guideline Development Team in partnership with the Society of Obstetricians and Gynaecologists of Canada, the Canadian Fertility and Andrology Society and the Canadian HIV/AIDS Trials Network. They were reviewed by the Infectious Diseases Committee and the Reproductive Endocrinology and Infertility Committee of the Society of Obstetricians and Gynaecologists of Canada and by the Canadian HIV Pregnancy Planning Guideline Development Team Core Working Group,\* and endorsed by the Executive and Council of the SOGC.

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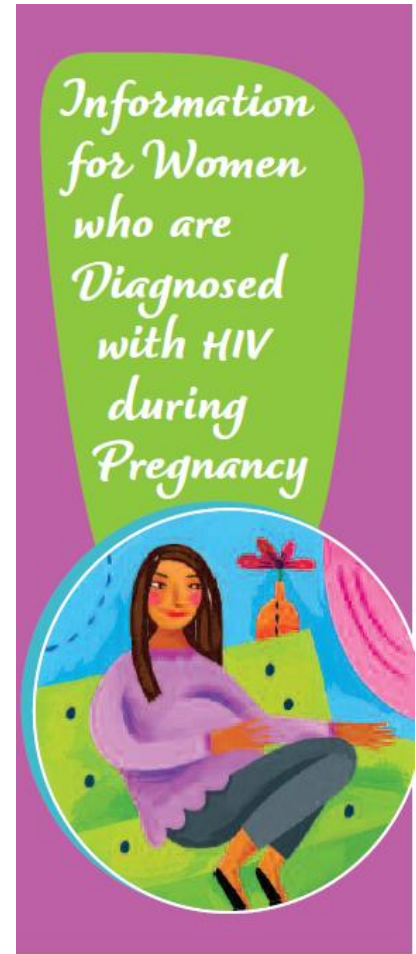
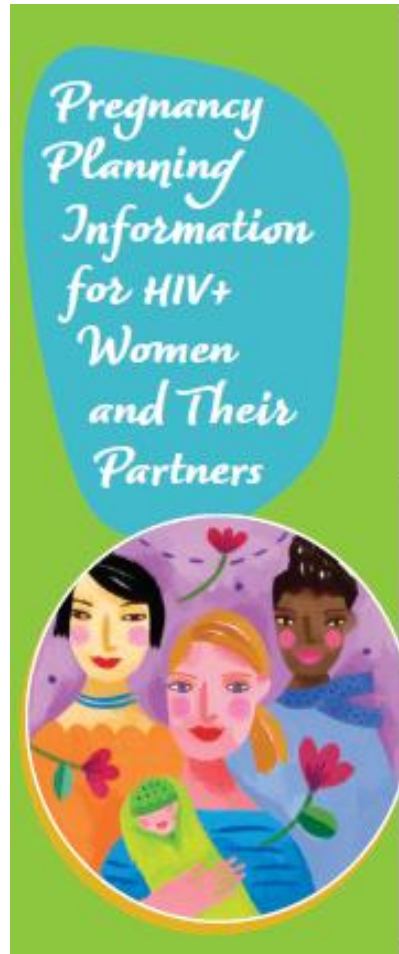
Deborah M. Money, MD, Vancouver BC

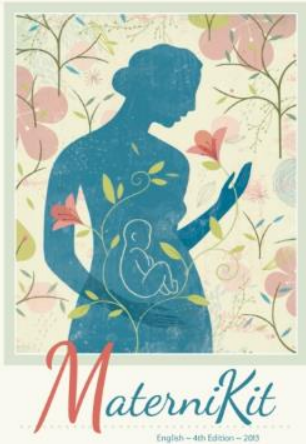
**Outcomes:** Intended outcomes are (1) reduction of risk of vertical transmission and horizontal transmission of HIV, (2) improvement of maternal and infant health outcomes in the presence of HIV, (3) reduction of the stigma associated with pregnancy and HIV, and (4) increased access to pregnancy planning and fertility services.

**Evidence:** PubMed and Medline were searched for articles published in English or French to December 20, 2010, using the following terms: "HIV" and "pregnancy" or "pregnancy planning" or "fertility" or "reproduction" or "infertility" or "parenthood" or "insemination" or "artificial insemination" or "sperm washing" or "IVF" or "ICSI" or "IUI." Other search terms included "HIV" and "horizontal transmission" or "sexual transmission" or "serodiscordant." The following conference databases were also searched: Conference on Retroviruses and Opportunistic Infections, International AIDS Conference, International AIDS Society, Interscience Conference on Antimicrobial Agents and Chemotherapy, the Canadian Association of HIV/AIDS Research, and the Ontario HIV Treatment Network Research Conference. Finally, a hand search of key journals and conferences was performed, and references of retrieved articles

# Pamphlets

- Available in French & English at [www.catie.ca](http://www.catie.ca)





# Not Covered – Serodiscordant Couples

With increasing numbers of serodiscordant couples conceiving, prenatal and pregnancy support is very important

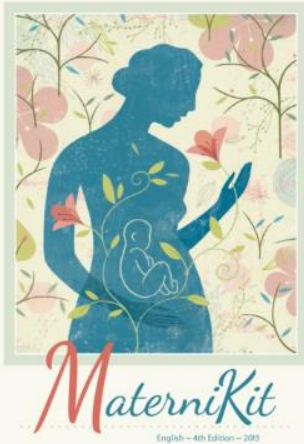
- Counseling on risk of HT in pregnancy (acute seroconversion)
- Repeating testing in pregnancy/L&D?
- Referring to appropriate OB care
- Male partner disclosure

# Key points & challenges

- Aiming for zero
  - Elimination of vertical HIV transmission is an achievable goal in Canada
- Ensuring timely universal access to HIV testing, treatment, and collaborative prenatal/HIV care ARE essential
- Reinforce importance of:
  - Prenatal/preconception period
  - Intrapartum
  - Postpartum



# Acknowledgements



**Women's College  
Hospital**



**The Women and HIV  
Research Program  
(WRHP) Team**



**For supporting the production  
and dissemination of the  
MaterniKit**



**abbvie**



**Thank you to the rest of the 2013 MaterniKit Revisions and  
Development Team:**

Dr. Mona Loutfy, Dr. Alice Tseng, Ms. Linda Robinson, Dr. Michelle Foisy, Dr. Mark Yudin, Dr. Lindy Samson, Dr. Anita Benoit





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# Questions and Discussion

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**Feel free to contact me about any HIV & reproductive health question**