

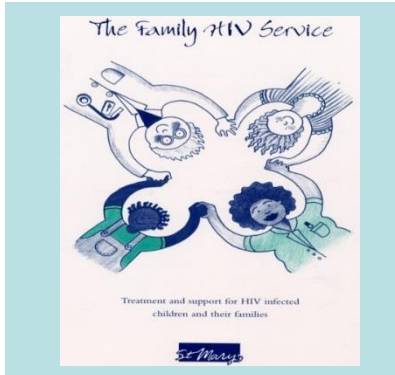
Breast Feeding with HIV in Resource Rich Settings – What do Women Want to Do?

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30.9.20

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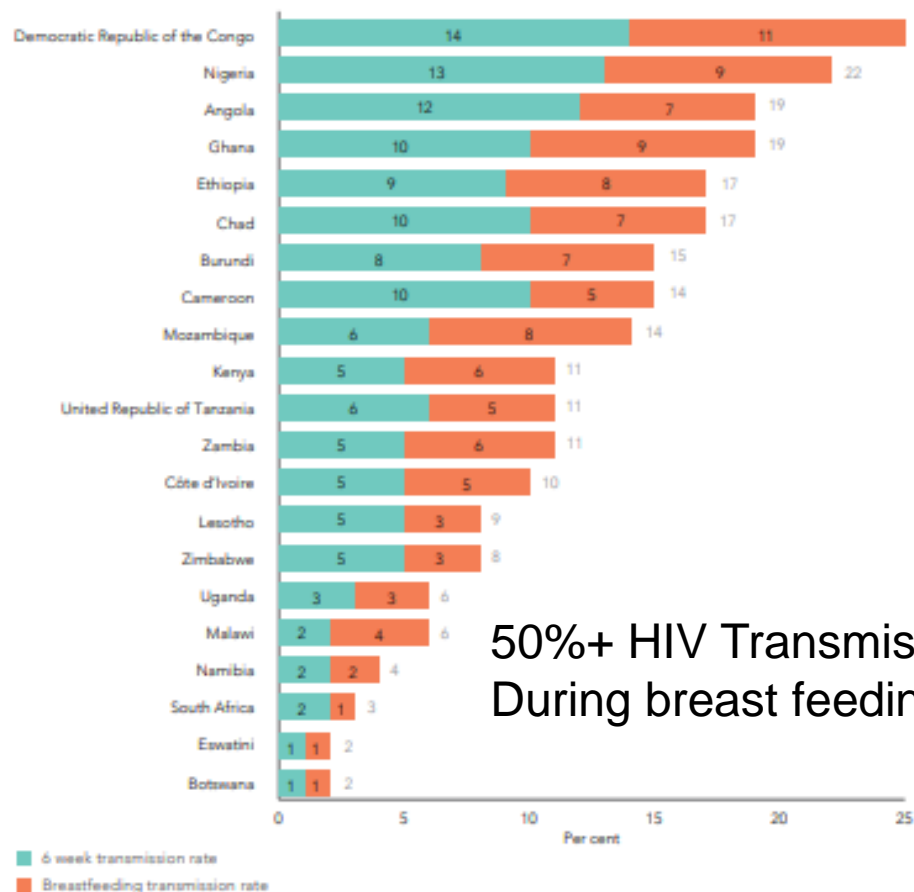


Acknowledgements:

Nell Freeman-Romilly, Pat Tookey, Yvonne Gileece & BHIVA Guidelines Team

Claire Thorne, Kate Francis, Helen Peters, Graham Taylor, Paula Seery, Pat Flynn, Angela Colbers, Karoline Aebi-Popp

Figure 4. Six-week vertical transmission rate and final transmission rate in the focus countries, 2019

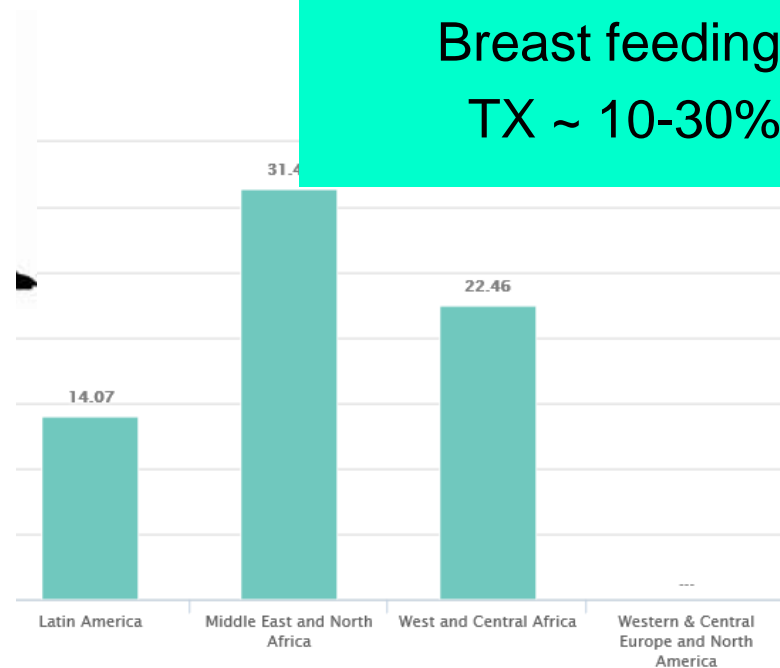


50%+ HIV Transmission
During breast feeding

mission 2018

2.7%

Resource Poor
HIV not diagnosed
No ART
Breast feeding
TX ~ 10-30%



New child infections due to gaps in prevention of vertical transmission, eastern and southern Africa, 2017 and 2019



Countries can use gap analysis → For elimination of MTCT

New ways to prevent infection in women & their infants:

Protect the HIV negative
PREP in pregnancy

PREP during breast feeding
for the mother
for the infant

Vaccination – passive / active
for the mother
for the infant

Treat the HIV positive
ART which has:

highest barrier to resistance

Least side effects

Least teratogenicity

Promotes adherence



Additional strategies beyond oral ART are required to eliminate Vertical Transmission.....

Long acting injectables

Combinations of injectables →

Depot contraceptives

Depot antipsychotics

etc

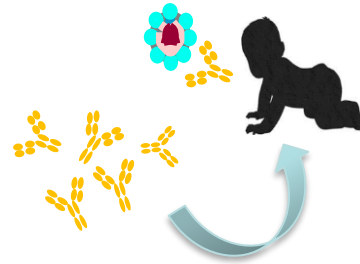


Therapeutic Vaccination

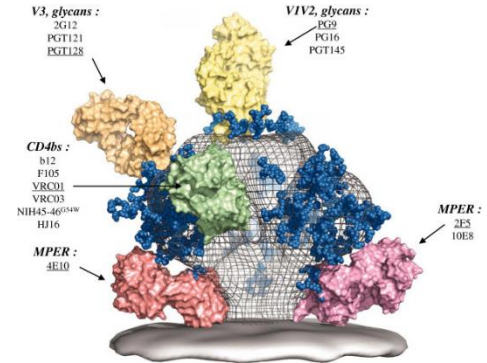
Passive (bNAbs)

active

.... Infant PEP /PREP



VRC01



Burton et al, 2012

New options for pregnancy & post partum → minimise delay to access

Is it safe for me to breast feed my baby?

Scenario 1:

Well woman with HIV, 31 years old

First pregnancy - 20 weeks gestation

Conceived on ART, still on first line ART

VL < 50 for 5 years

CD4 count 770



*My family expect me to breast feed,
I also believe it's the right thing to do -*

*I have read the WHO guideline (2016)
→ it says breast is best for women with HIV
what would you advise?*

“God will cure me and my child”

Scenario 2:

G 5+0, 32/40 weeks, CD4 - 50, VL - 270,000

Denies HIV, refusing any treatment

for herself before delivery

for herself at delivery

for the infant after delivery

wants normal delivery



I want to breast feed – as I did with all my other kids

Risk of transmission to this infant?

9 yr old, 7 yr old, 5, yr old, 2 yr old – where are they, have they been tested?

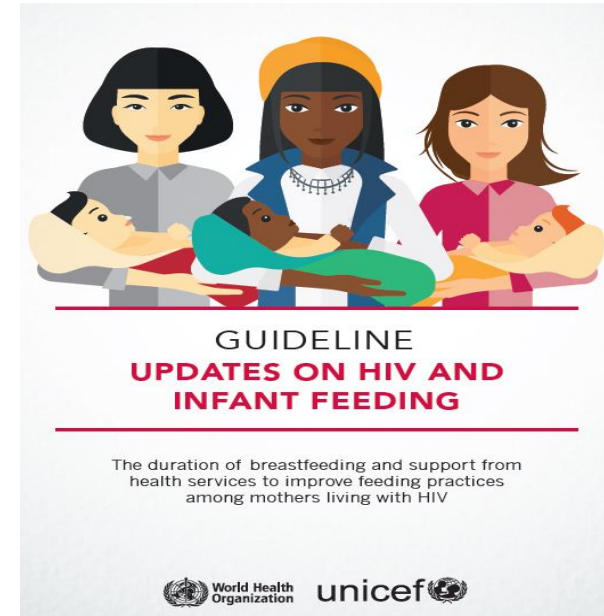


WHO Guideline on HIV & Infant feeding 2016

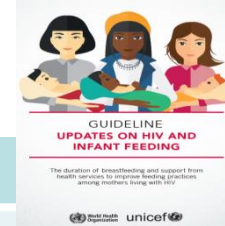
WHO recommends lifelong ART for everyone from the time they are first diagnosed with HIV infection.

This WHO guideline is intended mainly for countries with high HIV prevalence where diarrhoea, pneumonia and under-nutrition are common causes of infant mortality.

However, it may also be relevant to settings with a low prevalence of HIV depending on the background rates and causes of infant and child mortality



WHO Guidelines for Infant feeding 2016



Clinical Scenarios	WHO guidance for women with HIV
For how long should mothers with HIV breast feed?	<p>Mothers living with HIV should breastfeed for at least 12 months and may continue breastfeeding for up to 24 months or longer, if →</p> <p><i>(same as the general population)</i></p> <ul style="list-style-type: none">• Has access to lifelong ART and HIV care• Exclusively breastfeeds for the first 6 months• Introduce appropriate complementary foods after 6 months and continue breastfeeding• Only stop once a nutritionally adequate and safe diet without breast milk can be provided
If a mother does not exclusively breastfeed: is mixed feeding with ART better than no breastfeeding at all?	<p>ART also reduces the risk of HIV transmission in mixed feeding</p> <p>Although exclusive breastfeeding is recommended - when on ART, mixed feeding is not a reason to stop breastfeeding</p>
Is a shorter duration of planned breastfeeding with ART better than no breastfeeding at all?	<p>Any duration of breastfeeding is better than never initiating breastfeeding at all</p>

Breastfeeding advice for women with HIV living in the UK

British HIV Association guidelines for the management of HIV in pregnancy and postpartum 2018 (2020 third interim update)

- In the UK and other high-income settings, the safest way to feed infants born to women with HIV is with formula milk, as there is on-going risk of HIV exposure after birth. 1D
- Abstaining from breastfeeding can have financial and psychological repercussions for women, requiring support from the HIV MDT. 1C
- Women advised not to breastfeed should be provided with free formula to minimise vertical transmission of HIV. 1D
- Women not breastfeeding their infant by choice, or because of viral load >50, should be offered cabergoline to suppress lactation. 1D

Supporting women who choosing to breastfeed in the UK

Women who are fully suppressed on ART with good adherence and choose to breastfeed should be supported to do so.

They should be informed about the low risk of transmission of HIV through breastfeeding in this situation and the requirement for extra maternal and infant clinical monitoring. 1D

Maternal ART (rather than infant pre-exposure prophylaxis PrEP) is advised to minimise HIV transmission through breastfeeding and safeguard the woman's health. 1D

Women who choose to breast feed should fulfil the following criteria:

- A fully suppressed HIV viral load *(for as long a period as possible, but certainly during the last trimester of pregnancy)*
- A good adherence history
- Strong engagement with the perinatal MDT
- Prepared to attend for monthly clinic review & HIV viral load tests for themselves and their infant during and for 2 months after stopping breastfeeding

Risk Factors for HIV transmission & Breast Feeding



Viral Load

CD4 count

HIV sero-conversion during BF

Mastitis

Cracked nipples

Duration of BF

Mixed feeding

Infant oral thrush

Major Risk Factors for MTCT

Maternal

Plasma viral load

CD4 count

Advanced HIV

Delivery

Premature delivery

Mode of delivery

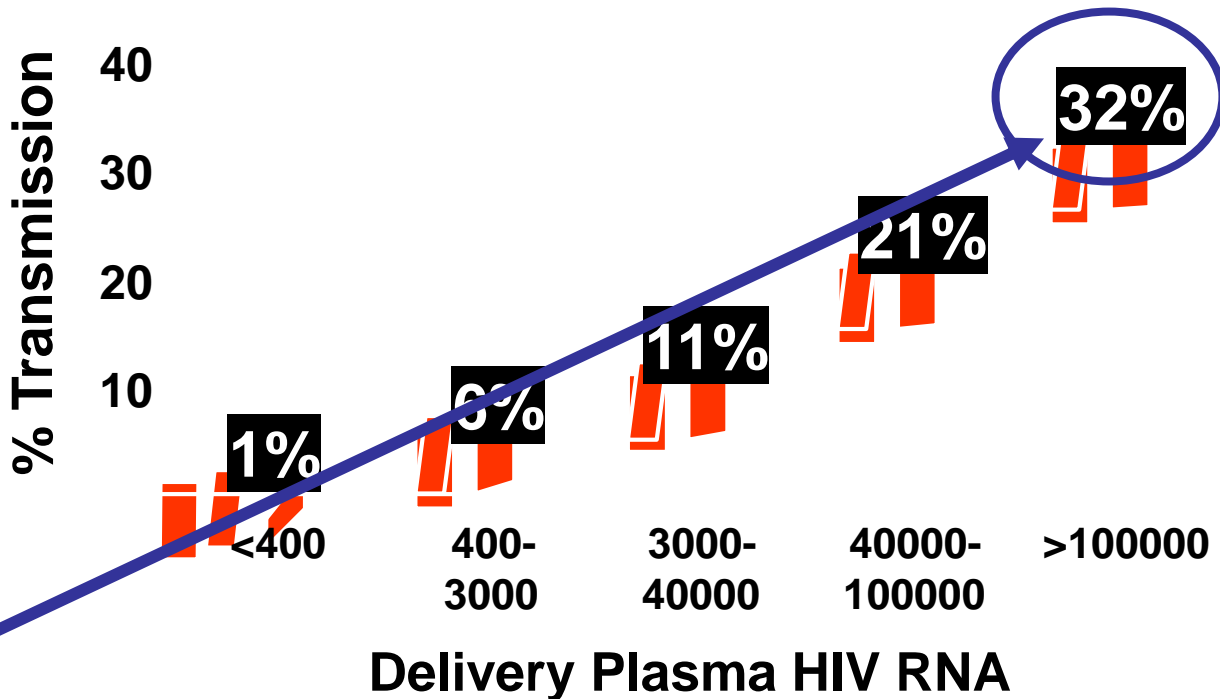
Duration of rupture of

Membranes

Birth canal infection

Breast feeding

- No ART



Blattner W et al. WITS study, 1990-1999. *XIII AIDS Conf*, July 2000, Durban S Africa (LBO4)

Learning from African Studies on ART and Breastfeeding



Prevention of HIV Transmission from Breastfeeding in Africa

H. Coovadia - Plenary abst 13 CROI 2007

NOT breast feeding is unsafe in developing countries

Early cessation of breastfeeding (<6 months) reduces HIV transmission but **increases** morbidity and mortality in infants born to HIV positive African women

Continued breast feeding **reduces** morbidity and mortality in **HIV infected** infants in Africa

***Balancing the risk of:
breast milk HIV transmission versus –
early weaning – malnutrition – gastroenteritis - death***

Duration & Pattern of Breastfeeding & Postnatal HIV Transmission : Pooled Analysis from West & South African Cohorts

Becquet R, et al PLoS ONE 4(10): e7397. 2009

N = 1195 infants, not perinatally infected, & breast fed

No maternal post natal ART

	<u>18 month HIV infection risk</u>
Less than 6 months BF	3.9% (2.3-6.5)
More than 6 months BF	8.7% (6.8 – 11.0)

Exclusive BF very similar to predominantly BF (only other liquids)

Solids in first 2 months of life 2.9 fold (1.1-8.0) ↑ risk of HIV

For breast feeding mothers advise → exclusive BF & **NO** early solids

West Africa - Ditrane-Plus and South Africa – Vertical Transmission study

Feeding and mother ***not on ART*** Risk of postnatal HIV transmission

Becquet R, et al PLoS ONE 4(10): e7397. 2009

Estimated postnatal risk of transmission:

Overall risk: 9.0/100 child-years
(95% CI 6.2–11.7)

Exclusive breastfeeding: 9.0/100 child-years
(95% SI, 6.0–12.1)

Predominant breastfeeding: 8.5/100 child-years
(95%SI, 1.2–18.1)

Breastfeeding plus solids: 41.2/100 child-years
(95%SI, 1.1–74.5)

Breast feeding mother no ART - infant PEP

ANRS 12174 - PROMISE Pre-EP

Nagot et al [Lancet](#). 2016 Feb 6;387(10018):566-73. doi: 10.1016/S0140-6736(15)00984-8.

RCT 1500 M-I pairs BurkinaFaso, South Africa, Uganda, Zambia

HIV-uninfected infants at day 7 - born to mothers not eligible for ART

Exclusive breastfeeding until 26th week of life

Cessation of breastfeeding at a maximum of 49 weeks

Randomised to: infant PEP - Lamivudine or Lopinavir/ritonavir

Primary endpoint → HIV-1 Tx - day 7 - 50 weeks of age

Secondary endpoints → safety (including resistance, adverse events and growth) & HIV-1-free survival until 50 weeks.

Infant Pre-EP

2009 -2012 enrolled 1273 infants → analysed 1236

615 → lopinavir–ritonavir 621 → lamivudine

17 HIV-1 infections (8 lopinavir/rit versus 9 lamivudine)

50 week cumulative HIV-1 infection rate – no difference

Lopinavir/rit 1.4% (95% CI 0.4–2.5)

Lamivudine 1.5% (0.7–2.5)

Clinical / biological severe adverse events – no difference

Lopinavir/rit 251 (51%) grade 3–4 events

Lamivudine 246 (50%) grade 3–4 events

Nagot et al [Lancet](#). 2016 Feb 6;387(10018):566-73. doi: 10.1016/S0140-6736(15)00984-8.

Breast Feeding **not on ART** & Risk of HIV Transmission

Risk of HIV
Transmission to the
uninfected Infant
after birth

Duration of
Breast feeding

6 months

12 months

Mother in Africa
Not on ART

Breast Feeding
for 6 months
exclusively

Ditrame / VTS

3.9%
(2.3-6.5)

8.7%
(6.8 – 11.0)*

Mother in Africa
Not on ART

Breast Feeding for 6
months exclusively

Infant on daily Pre-EP

Pre-EP trial (3TC/LPV/r)
PROMISE trial (NVP)

PROMISE
0.3% (0.1-0.6)

PROMISE
0.6% (0.4–1.1)

Pre-EP
1.5% (0.7–2.5)



African data

*Each additional month of BF beyond 6 mths of age → 1% risk of HIV (95%CI, 0.5–1.7)

Postnatal HIV transmission in breastfed infants of HIV-infected women **on ART**- meta-analysis

Bispo S et al. Journal of the International AIDS Society 2017, 20:21251

Reviewed studies 2005 to 2015 – 11 studies selected

All mother advised to exclusively breast feed for 6 months

Outcomes: overall & postnatal HIV Tx at 6, 9, 12, 18 months:

Overall 6 months Tx rate: 3.54% (95% CI: 1.15–5.93%)

Overall 12 months Tx rate: 4.23% (95% CI: 2.97–5.49%)

Postnatal 6 months Tx rate: 1.08 (95% CI: 0.32–1.85)

Postnatal 12 months Tx rate: 2.93 (95% CI: 0.68–5.18)

ART mostly provided for PMTCT and did not continue beyond 6 months postpartum

No study provided data on mixed feeding & transmission risk

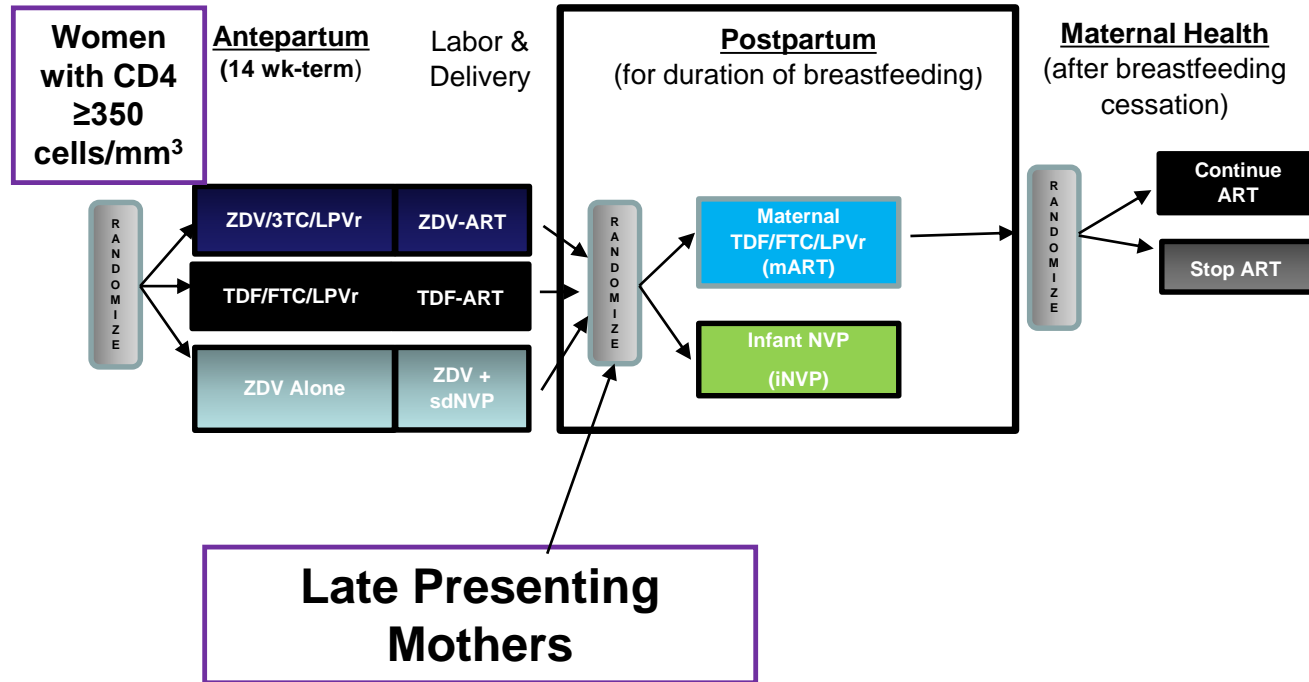
Association of Maternal Viral Load and CD4 Count with Perinatal HIV-1 Transmission Risk during Breastfeeding in the PROMISE Postpartum Component

10th Workshop on HIV Pediatrics
July 20-21, 2018
Amsterdam, the Netherlands

Patricia M. Flynn, MD, Taha E Taha, MD, Mae Cababasay, MS, Kevin Butler, MS, Mary Glenn Fowler, MD, Lynne M. Mofenson, MD, Maxensia Owor, MD, Susan Fiscus, PhD, Lynda Stranix-Chibanda, MD, Anna Coutsooudis, PhD, Devasena Gnanashanmugam, MD, Nahida Chakhtoura, MD, Katie McCarthy, MPH, Cornelius Mukuzunga, MD, Bonus Makanani, MD, Dhayendre Moodley, PhD, Teacler Nematadzira, MD, Bangani Kusakara, MD, Sandesh Patil, MD, Tichaona Vhembo, MD, Raziya Bobat, MD, Blandina T Mmbaga, MD, Maysseb Masenya, MD, Mandisa Nyati, MD, Gerhard Theron, MD, Helen Mulenga, MD, David E. Shapiro, PhD and the PROMISE Study Team

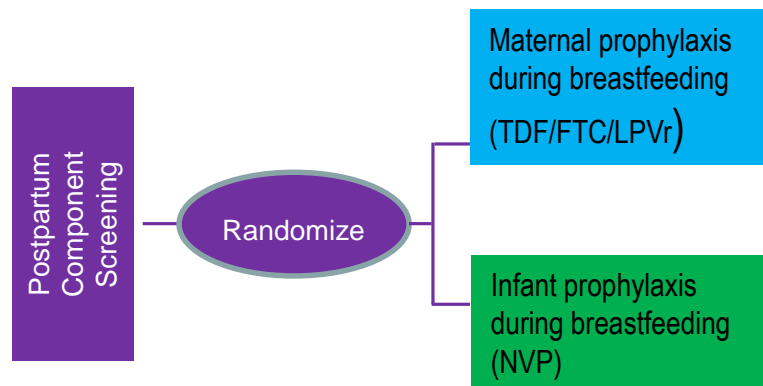
Background

- Increased maternal viral load (MVL) and decreased CD4 cell counts (CD4) have been associated with increased risk of perinatal and postnatal HIV-1 transmission



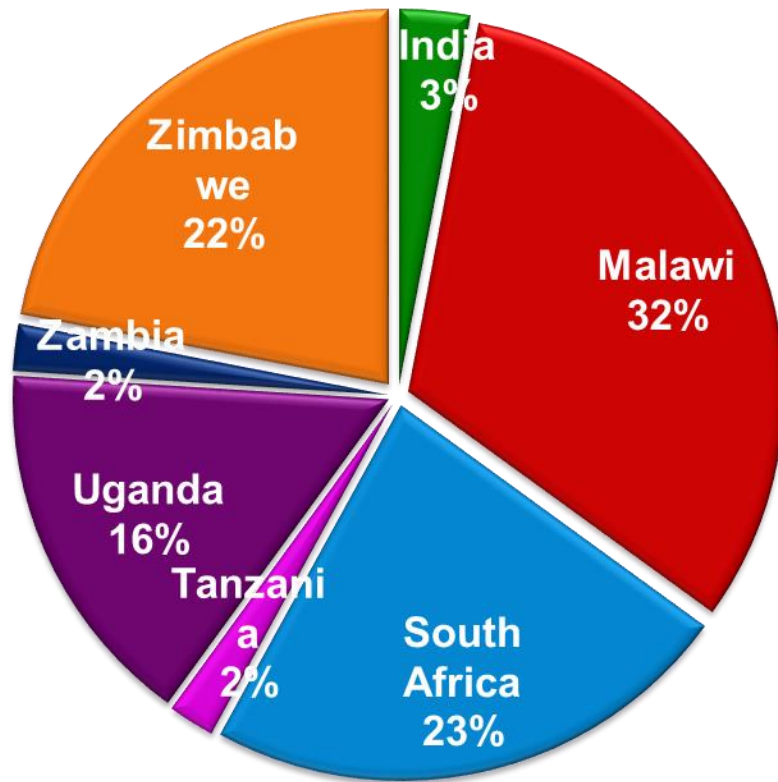
PROMISE – Postpartum Component

- Eligible mother-infant (M-I) pairs (maternal CD4 ≥ 350 cells/mm³ or country-specific level and infant HIV-1 NAT negative and > 2 kg) were randomized at 6 – 14 days postpartum to a maternal three-drug ART regimen (TDF/FTC/LPVr preferred, **mART**) arm or infant nevirapine (**iNVP**) arm
- Infants in the **mART** arm also received NVP for 6 weeks
- Late-presenting women were enrolled during labor or within 6 days of delivery after assuring the mother's CD4 count met eligibility criteria and infant had a negative HIV-1 NAT



PROMISE – Postpartum Component

- 2,431 M-I pairs were randomized at 6-14 days postpartum to **mART** (n=1,220) or **iNVP** (n=1,211) at 14 sites in 7 countries
- 95% of the mothers had been enrolled in the antepartum component (42% ZDV and 53% mART)
- Randomized regimens were continued until 18 months postpartum, unless stopped earlier due to cessation of breastfeeding, infant HIV-1 infection, or toxicity



Methods

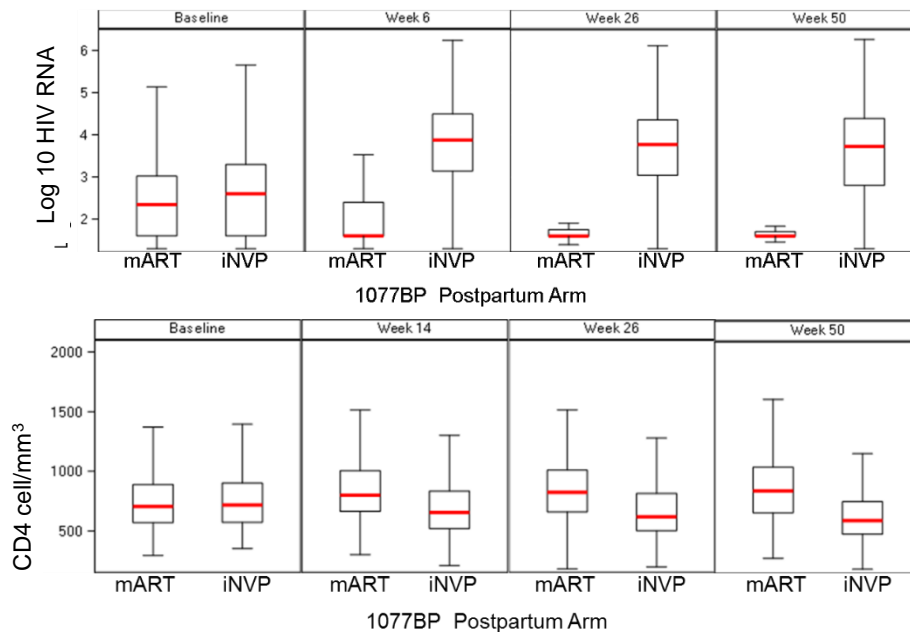
- Study Evaluations

Maternal Viral Load	Entry (6-14 days postpartum), weeks 6, 14, 26, and 50 postpartum
Maternal CD4	Entry, weeks 14, 26, 38, 50 postpartum
Infant HIV-1 NAT	Entry (6-14 days postpartum), week 6, every 4 weeks until week 26, then every 12 weeks

- Infant infection was defined as a positive HIV-1 NAT at any two post-entry timepoints
- The associations of baseline and time-varying MVL (<1000 or $\geq 1,000$ copies/ml) and CD4 (< 500 or ≥ 500 cells/mm³) with transmission risk were assessed using proportional hazards regression models and adjustment for randomization to the mART arm during the antepartum component of PROMISE

Analysis

- For analyses using time-varying MVL and CD4, each treatment arm was analyzed separately because the post-randomization visits showed little overlap between the two arms with respect to MVL and CD4 cell count



Results

Baseline MVL and CD4 cell count by Treatment Arm		
	mART n=1,220	iNVP n=1,211
<u>Baseline Maternal Viral Load</u>		
< 1,000 copies/mL	911 (75%)	814 (67%)
≥ 1,000 copies/mL	309 (25%)	397 (33%)
<u>Baseline CD4 count</u>		
< 500 cells/mm ³	162 (13%)	170 (14%)
≥ 500 cells/mm ³	1,058 (87%)	1,041 (86%)

- Baseline MVL (p=0.11) and CD4 cell count (p=0.51) were not significantly associated with infant HIV-1 transmission

Results, continued

- Time-varying MVL was significantly associated with infant HIV-1 infection in the **mART** arm but not in the **iNVP** arm
- Time-varying CD4 was significantly associated with infant HIV-1 infection in the **mART** arm but not in the **iNVP** arm
- Adjusting for whether or not the mother was randomized to the mART arm in the antepartum component of PROMISE component did not change these findings

Hazards Ratio (95% Confidence Interval)		
	mART	iNVP
Time-varying MVL	13.96 (3.12-62.45)	1.04 (0.20-5.39)
Time-varying CD4	0.18 (0.03-0.93)	0.38 (0.08-1.77)

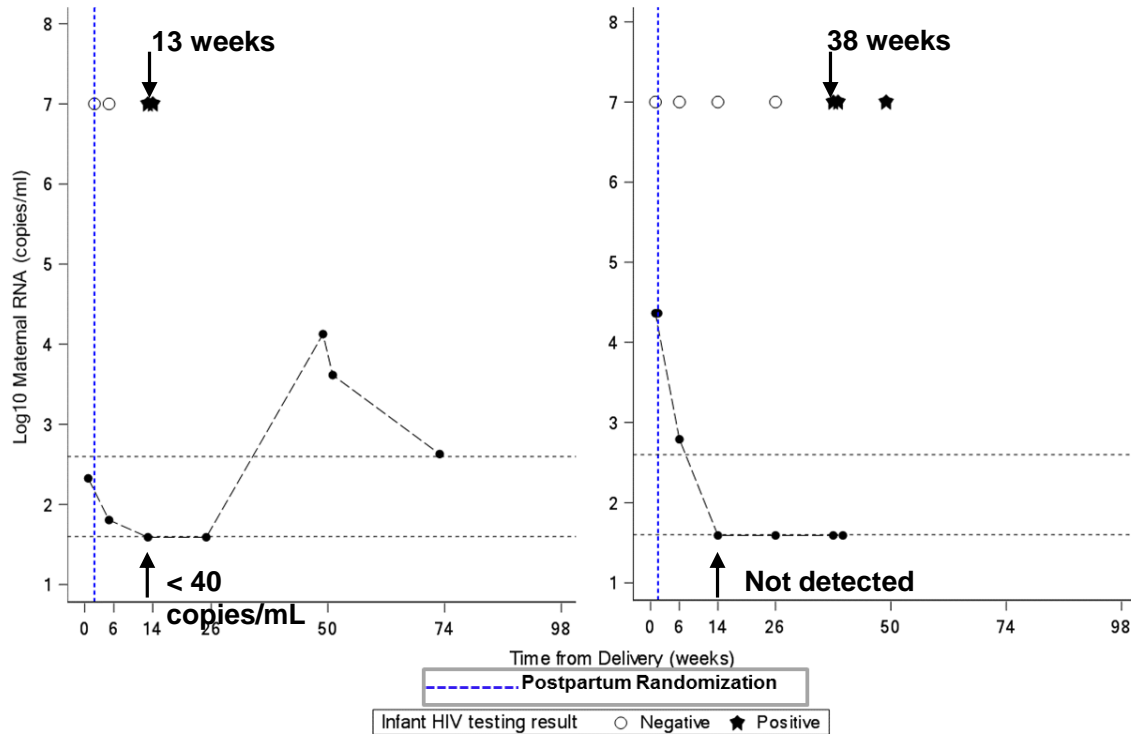
Infant HIV-1 Infections

- There were seven infants with HIV-1 infection in each treatment group

	mART	iNVP
HIV-1 infections	n=7	n=7
Median infant age at first positive HIV-1 NAT	38 weeks (range, 13-50 weeks)	26 weeks (range, 6-74 weeks)
MVL closest and prior to first positive infant HIV-1 NAT	Not detected – 52,002 copies/mL	815 – 153,963 copies/mL

Results, continued

- In the **mART** arm there were two infected infant cases where MVL was undetectable or < 40 copies/mL in assessments prior to first positive infant HIV-1 NAT



Conclusions

- In the **iNVP** arm, time-varying MVL and CD4 were not significantly associated with HIV-1 transmission during breastfeeding. However, in the **mART** arm, increased MVL and decreased CD4 during breastfeeding were associated with increased risk of infant HIV-1 infection
- Two infant transmissions were observed following periods of MVL that were < 40 copies/mL
- These data emphasize the importance of adherence to mART in controlling MVL and preventing infant HIV-1 infection
- iNVP could be considered in situations with documented poor maternal ART adherence

Breastfeeding with maternal antiretroviral therapy or formula feeding to prevent HIV postnatal mother-to-child transmission in Rwanda

“AMATA”
study

Cécile Alexandra Peltier^a, Gilles François Ndayisaba^a,
Philippe Lepage^b, Johan van Griensven^a, Valériane Leroy^c,
Christine Omes Pharm^a, Patrick Cyaga Ndimubanzi^a,
Olivier Courteille^a and Vic Arendt^d

Non randomised
Interventional cohort study:

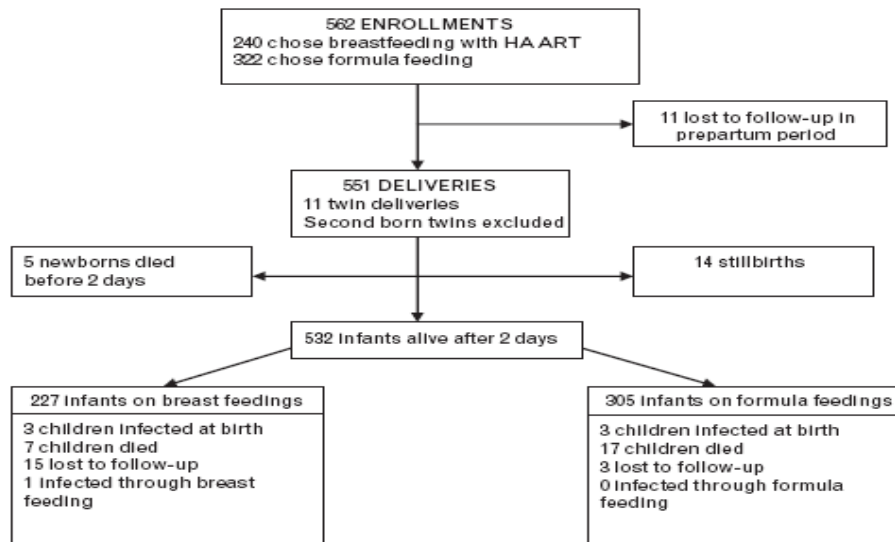
BF + ART for 6 months

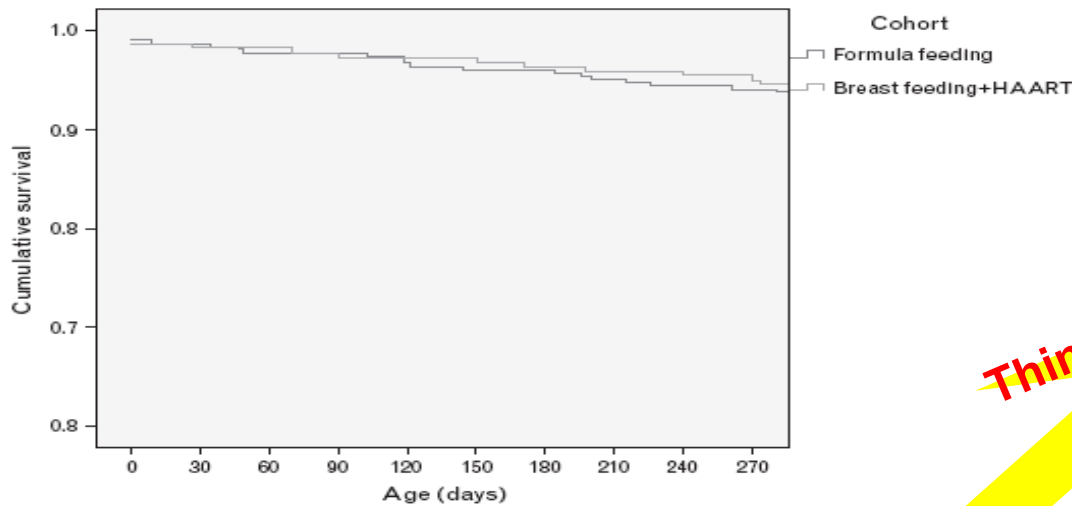
V

Formula feeding

All received ART from 28wks

9mth cumulative risk of
HIV transmission rate & HIV free
survival





**Things can go unexpectedly wrong
Mother - severe vomiting**

Overall HIV transmission → 1.3% (7 infants – 6 in-utero infections)

One infant in the BF group infected at 3-7 months

9 month post natal infection risk with BF 0.5% (95% CI – 0.1-3.4%; $p = 0.24$)

9 month cumulative mortality:

3.3% in BF group (95% CI – 1.6 – 6.9%)



5.7% in FF group (95% CI – 3.6 – 9.2%) ($p = 0.2$)

HIV free survival at 9 months:

95% in BF group (95% CI – 91-97%)

94% in FF group (95% CI – 91-96%) ($p = 0.66$)

Europe - Breast Feeding on **ART** & Risk of HIV Tx

<p>Risk of HIV Transmission to the uninfected Infant after birth</p> <p>Duration of Breast feeding</p>	<p>Mother in Europe On ART (long term)</p> <p>Formula Feeding</p> 	<p>Mother in Europe On ART (long term)</p> <p>Breast Feeding</p> 	<p>Mother in Africa On ART (most ART only for 6 months)</p> <p>Breast Feeding for 6 months exclusively then adding complementary foods</p> <p>Meta-analysis*</p>	<p>Mother in Africa On ART (long term)</p> <p>Breast Feeding for 6 months exclusively then adding complementary foods</p> <p>PROMISE Trial</p>
6 months	0	No data	1.08% (0.32-1.85)	0.3% (0.1-0.8)
12 months	0	No data	2.93% (0.68-5.18)	0.7% (0.3-1.4)
18 months	0	No data	No data	0.7% (0.3-1.4)
24 months	0	No data	No data	0.7% (0.4-1.5)

What we learn from African Studies on ART and Breastfeeding



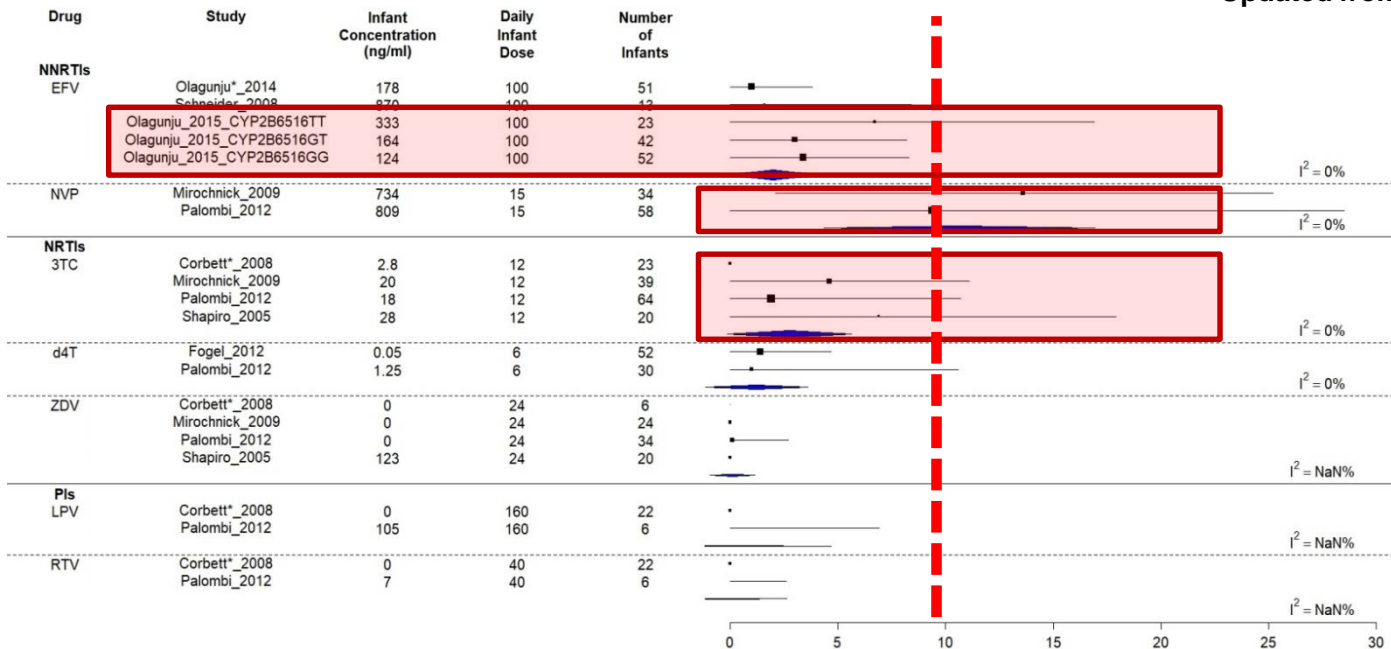
Maternal ART
& Formula feeding
MTCT - 0%



Maternal ART /
infant ART
& Breast feeding
MTCT ~ 0.7%

Infant Exposure to ARVs in Breast milk - low

Waitt and Bonnett, CROI 2018
Abstract 55
Updated from Waitt JAC 2015



as percentage of recommended paediatric dose

TFV (given as maternal TDF): Infant concentrations not detectable
DTG ~ 1% infant mg/Kg dose

PACIFY – Survey of Women's attitudes to BF with HIV in the UK (Farai Nyatsanza, HIV Women's Meeting, Seattle 2019)

Women recruited from 12 UK clinics June 2017–June 2018

94 women responded to our questionnaire

(either pregnant or up to 3 months post partum)

69% of participants were Black African

Median age 36 years (range 20-44)

Median CD4 count was 618 cells/mm³

92% had undetectable HIV viral load at delivery

(1 had a HIV viral load of 268 copies/ml, 7 no data)



Table of Results	Yes	No	No answer	Don't know
Have healthcare workers discussed BF with you?	89%	9%	2%	
Would you like more information on BF with HIV?	48%	51%	1%	
Have you ever had to lie about your reasons for not breast feeding?	66%	22%	12%	
Have any friends, family or members of your community ever questioned you about your reasons for not breast feeding?	62%	27%	12%	
Living with HIV, would you like to breast feed your child?	38%	48%	7%	6%

Table of Results

Is it safe for women with detectable HIV in the blood to breastfeed?

Is it safe for women on treatment (“asleep”) to BF?

If you were to breastfeed, what would be the biggest issue for you?

What would be the biggest issue for you whilst you breastfeed?

What would be the biggest issue for you if you were to breastfeed?

50%

47%

2%

1%

67%

31%

2%

Don't know

PACIFY Results

38% of women said they would like to breastfeed
Stigma and secrecy was an issue for 2/3 of women

It is time for a more open dialogue with women about breastfeeding
and to optimise ways to support those that choose to do so

How many women are breast feeding?

NSHPC conducts **national surveillance** of all pregnancies to women living with HIV in the UK/Ireland

Enhanced surveillance: data collected by phone for **all reported cases of planned/supported breastfeeding** with paediatric and maternity respondents and included:

- Reasons for wanting to breastfeed
- Whether the woman's partner and GP knew her HIV status
- Duration of breastfeeding
- Whether any mixed feeding occurred before 6 months of age
- Details of maternal and infant test results during breastfeeding
- Maternal cART during breastfeeding
- Infant confirmatory antibody tests (18-24mths)

2012-2019: UK - 7187 livebirths to HIV diagnosed women

1.9% (135/7187) reported **planned and/or supported to BF**

13% (18/135) BF more than one infant

93% (125/135) women **diagnosed before pregnancy**

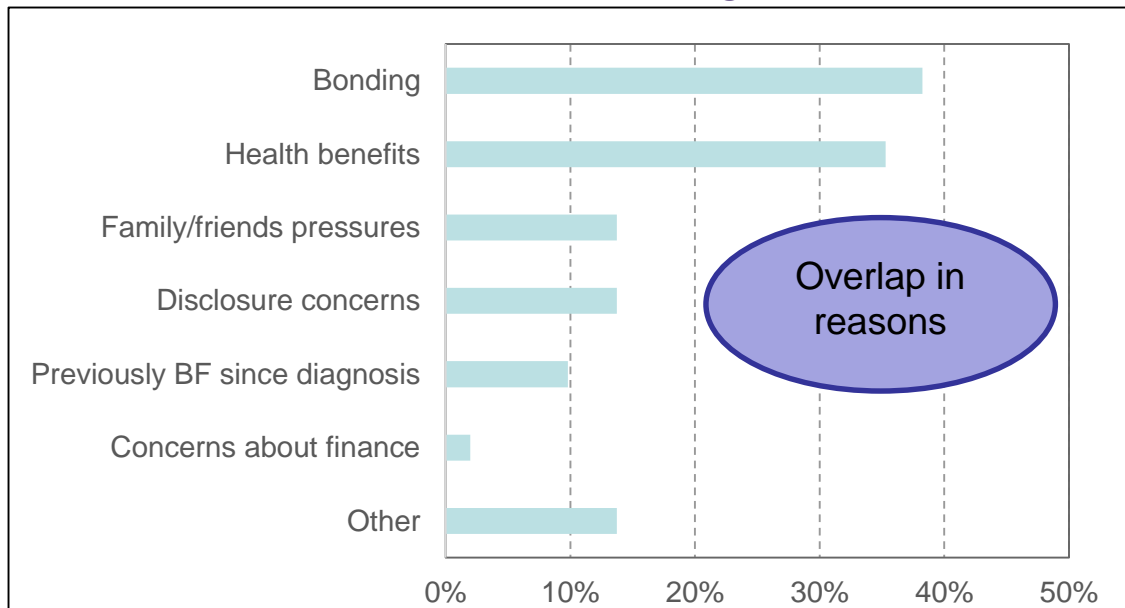
83% (112/135) women **born abroad**

Median age at delivery was 35yrs (IQR: 31,40)

Results

Enhanced data collection has been carried out for 102 supported BF cases to date:

Reported reasons for breastfeeding (n=81)



Partners were unaware of maternal HIV status in 11/102

2/11 both unaware

GPs were unaware in 10/102

Problems with attendance for monthly VL testing reported in 22/102 cases

Breastfeeding had stopped in 90/102, 3/102 not known (LTF)

Wide range of duration of BF: ranged from 1 day- 2 years
Median duration: 7wk (IQR: 3, 16)

Reasons for stopping BF:

plan to stop (36), mastitis (3), VL rebound (4), problems latching (6),
hospitalisation of mother and/or infant (2)

Mixed feeding before 6 months of age → reported in 10/90 cases
Mastitis → reported in 2 cases where breastfeeding continued

Current case status

Among cases where breastfeeding

Infant follow-up (when

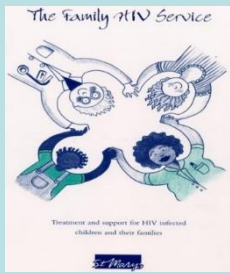
No VTs among supported BF cases so far....

2015-16 - one postnatal transmission likely due to covert BF by a woman who was undetectable throughout pregnancy

Highlights the importance of HARM REDUCTION & supporting women as much as possible.....

- 1 negative antibody
 - 1 still in follow-up
 - 1 lost to follow-up
- reported at least 1 detectable VL
- ing breastfeeding:

BF ongoing in 9 cases: 1 reported maternal VL blip



Breast feeding experiences of mothers with HIV from two UK centres

Paula Seery^{1,2}, Hermione Lyall^{1,2}, Moira Marks¹, Sophie Raghunanan¹, Caroline Foster¹, Waheed Khan², Sarah Dermont²

¹Imperial College Healthcare NHS Trust, ²Chelsea & Westminster Hospital NHS Foundation Trust

Background: 8 women breast fed (BF)
10 babies between 2012-2017 in two London Hospitals

Methods: A retrospective record review of BF mothers and babies

Results:

Women: aged 35-46yrs (median 38.25yrs), 6/8 Black African.
7 on ART from conception, all CD4 counts >500, all VL <50 at delivery.

Babies: 3 vaginal delivery, 7 elective/ emergency section. Median gestation 38+3. All babies received 4 weeks Zidovudine PEP.

Problem s	Total	Mastitis	Diarrhoe a +/- vomiting	↓Infant weight	Abnor mal LFTs	Other
Mother	3	1	1			1
Baby Age		FF → BF → MF <1 week	BF → FF → MF <1 week			Urticaria BF 6 weeks
Baby	5		1	1	1	2
Baby Age			BF 19 months	BF → MF <1 week	BF 2-7 months	Baby reluctant to stop BF >12 < 22 months

Breastfeeding :

3 babies BF for <1 week
(2/3 pasteurised EBM)

7 babies, average BF duration
→ 33 weeks (range 4 – 95 wks)

3 babies were exclusively BF
4 mixed fed
→ 3/4 introducing formula for
clinical reasons (table)

1 baby was covertly breast fed
(mixed fed)

Monitoring: 6 babies additional blood tests to routine follow up (1-19 extra tests)

Mothers → on average 6 extra VL tests

One mother & baby travelled abroad unmonitored for 6 months

Figure 1: GP communication

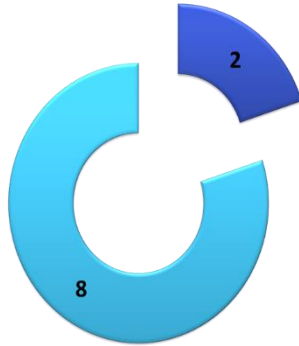


Figure 2: Partner Knowledge of HIV

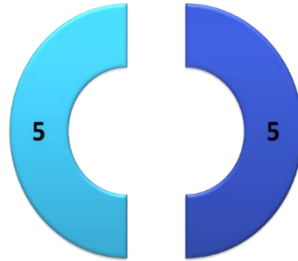
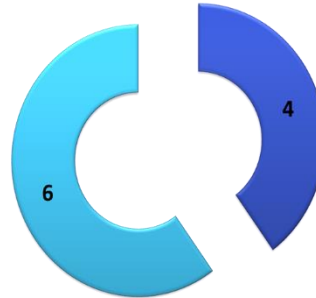


Figure 3: Extended family member staying as reason for breast feeding



■ Aware of HIV ■ Unaware of HIV ■ Aware ■ Unaware ■ Yes ■ No

All mothers remained fully suppressed throughout follow up and there have been no HIV transmissions to babies to date.

Conclusion:

Women who BF enjoyed many benefits but also faced challenges.

A higher proportion than expected had not informed partners, family, or primary HCPs about their HIV.

Raising concerns BF could be part of maintaining “the secret”

Breastfeeding Advice as Harm Reduction

“People will make more health-positive choices if they have access to adequate support, empowerment, and education”.

Levison, J., Weber, S. and Cohan, D. (2014). Breastfeeding and HIV-Infected Women in the United States: Harm Reduction Counseling Strategies. *Clinical Infectious Diseases*, 59(2), pp.304-309.

Patient Information on HIV and Breastfeeding

Which simplifies complex (and changing)
information

+

Accounts for patient's wishes

+

Persuasively guides patients towards the safest
approach

The Safer Triangle

No virus

Only breastfeed if
your HIV is
undetectable.



Happy tums

Only breastfeed if
both you and your
baby are free from
tummy problems

Healthy breasts for mums

Only breastfeed if your breasts
and nipples are healthy with no
signs of injury or infection.

BHIVA Pregnancy guidelines 2018

Two Patient Leaflets



1 – for all pregnant women with HIV:

‘General information on Feeding Your Baby’

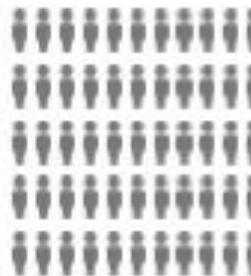
2- for women with HIV who want to breastfeed:

‘HIV and Breastfeeding Your Baby’

HIV and breastfeeding your baby

The safest way for a mother living with HIV in the UK to feed her baby is to bottle feed using formula milk.

If you are on treatment with an undetectable viral load and choose to breastfeed your baby we can help you make it as safe as possible for your baby, but it will not be as safe as using formula. Until we know more about the safety of breastfeeding on antiretroviral therapy, our careful guidance will give your baby his or her best chance of remaining HIV free while being breastfed. Always protect your baby using 'The Safer Triangle' below:



If 100 mothers with HIV breastfeed
while having an undetectable viral load

1–2 babies may become HIV positive

No virus

If the HIV virus in your blood is detectable, there will be HIV in your breast milk, and HIV will enter your baby's body on feeding. You should only breastfeed your baby if your HIV is undetectable.



Happy tums

Diarrhoea and vomiting show that a tummy is irritated. If your baby's tummy is irritated it may be more likely that HIV will cross into the blood stream and infect your baby. If your tummy is irritated you may not absorb your HIV medication properly. Only breastfeed if both of you have a 'happy tummy'.

Healthy breasts for mums

There may be HIV in your breast milk if your nipples are cracked or bleeding, or if you have thrush, develop an infection or have mastitis. Only breastfeed if your breasts are healthy.

The Safer Triangle means:

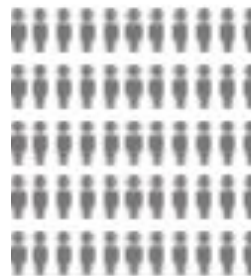
No Virus + Happy Tums + Healthy Breasts for Mums

Only breastfeed if your HIV is undetectable AND both you and your baby are free from tummy problems AND your breasts and nipples are healthy with no signs of infection.

If HIV virus becomes detectable in your blood: Stop breastfeeding and start using formula milk. Do not use breast milk you have expressed and stored. Feed your baby using formula only until you have spoken with your HIV clinic.

If your baby has diarrhoea or vomiting: Feed your baby with formula milk only. Keep feeding your baby using formula milk even after their tummy is healed.

If you have diarrhoea or vomiting, or your breasts have an injury or infection: Stop breastfeeding and feed your baby with formula milk OR use breast milk that you expressed more than 2 days (48 hours) before your tummy or breast problem began. If your baby has formula milk while you are ill, continue feeding your baby formula milk only. If your baby did not receive formula milk you may return to breastfeeding 2 days (48 hours) after your breast problem is healed. If you had tummy problems you must contact your HIV clinic before breastfeeding.



with HIV formula
air babies:

come HIV positive

Testing for HIV in infants born to breast feeding mothers with HIV on ART

Formula Fed Infant

4 (5 if high risk) blood tests

Birth HIV PCR

High risk infants - additional week 2-3
HIV PCR

Week 6 HIV PCR (off PEP)

Week 12 HIV PCR (off PEP)

Loss of HIV antibody at 18 months

Breastfed Infant

4 + X monthly blood tests

Birth HIV PCR

Clinical review & monthly HIV PCR when
Breast feeding

Week 4 HIV PCR (off BF)

Week 8 HIV PCR (off BF)

Loss of HIV antibody at 18 months

Back to our 2 women – breast feeding?

Scenario 1



Conceived on ART

still on first

VL

Birth straight forward
baby breast feeding well

→ at 5 weeks of age

developed bloody diarrhoea

→ cow's milk protein intolerance

Op
Like
What would you do?

We would support BF

Scenario 2



CD4 - 50, VL - 270,000

Does not believe in HIV

Not on ART

FF ~ 15% risk of HIV Tx

BF ~ 30% risk of HIV Tx

Not engaging with MDT, unlikely to
comply with ART, → antenatal SC
referral

*We **not** would support BF → SC referral*

NSHPC confidential BF data collection form

MREC approval ref: MREC/04/2/009

Form date 01/19

www.ucl.ac.uk/nshpc

CSTU MSTU SU PAED HOSP

PART 1: CHILD INFORMATION

Date of birth: ☐ Male or ☐ Female Initials: Surname:

Hospital no. NHS/CHI no.

Home postcode (leave off last letter): Place of birth: ☐ UK/Ireland - hospital of birth:

Mother's date of birth:

Mother's country of birth: If not UK/Ireland, date arrived:

PART 2: BREASTFEEDING CIRCUMSTANCES

If reasons for breastfeeding are known, please select one or more of the following:

- ☐ Bonding ☐ Health benefits for baby/mother ☐ Financial ☐ Cultural
☐ Breastfed previously (BEFORE diagnosis) ☐ Breastfed previously (AFTER diagnosis)
☐ Family/friends expectations/pressure ☐ Other:

GP aware of mother's HIV status: ☐

Partner aware of mother's HIV status: ☐

PART 3: INFANT FEEDING

Date breastfeeding commenced:

Planned duration of breastfeeding:

Is breastfeeding currently: ☐ Yes ☐ No

Date breastfeeding stopped:

Period of exclusive breastfeeding:

Was the infant ever formula fed: ☐ Yes ☐ No

Reasons for formula feeding:

What happened with BF after formula feeding:

☐ continued whilst also formula fed

☐ Reintroduced after mastitis resolved

☐ Reintroduced after mastitis resolved

Were solid foods introduced during breastfeeding: ☐ Yes ☐ No

If yes, date (range or exact):

PART 4: MATERNAL MONTHLY VIKAL LOAD

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Sample date:

Considering U = U for Breast feeding?
 Balancing the risk for Mother & Child
 Support women
 Avoid vertical transmissions
 Put our data together - Learn more
 Answer the question

Thank You

