SESSION 16
HIV AND BREASTFEEDING

Breastfeeding Promotion and Support

A Training Course for Health Professionals

Adapted from the Baby Friendly Hospital Initiative: Revised, Updated and Expanded for Integrated Care (Section 3) WHO/UNICEF 2009

Session Objectives:

At the end of this session, participants will be able to:

1. State the National Policy
2. Understand the problems of HIV in infant feeding
3. Explain the risk of mother-to-child transmission of HIV
4. Describe factors which influence mother-to-child transmission
5. Outline approaches that can prevent mother-to-child transmission through safer infant feeding practices
6. State infant feeding recommendations for women who are HIV-positive and for women who are HIV-negative or do not know their status
7. Describe elements to be considered on infant feeding with relations to HIV

1. National Policy on HIV and Breastfeeding

HIV and Breastfeeding -National Policy

- Current policy on HIV mothers (*Pekeliling Ketua Pengarah Kesihatan Bil 5/2002)*
  - The Government is committed in promoting, protecting and supporting breastfeeding in Malaysia.
  - However due to the risk of transmission of HIV through breast milk, babies born to mothers who are HIV positive ***will not*** be given breast milk.
  - Infant formula will be provided for these babies.
  - On discharge from the hospital, mothers with family income of less than RM1200 per month will be provided with infant formula for up to six months.

2. HIV and Infant Feeding

Defining HIV and AIDS

- HIV
  - Human immunodeficiency virus
  - Virus that causes AIDS

- AIDS
  - Acquired immunodeficiency syndrome
  - Active pathological condition that follows earlier non symptomatic state of HIV +ve

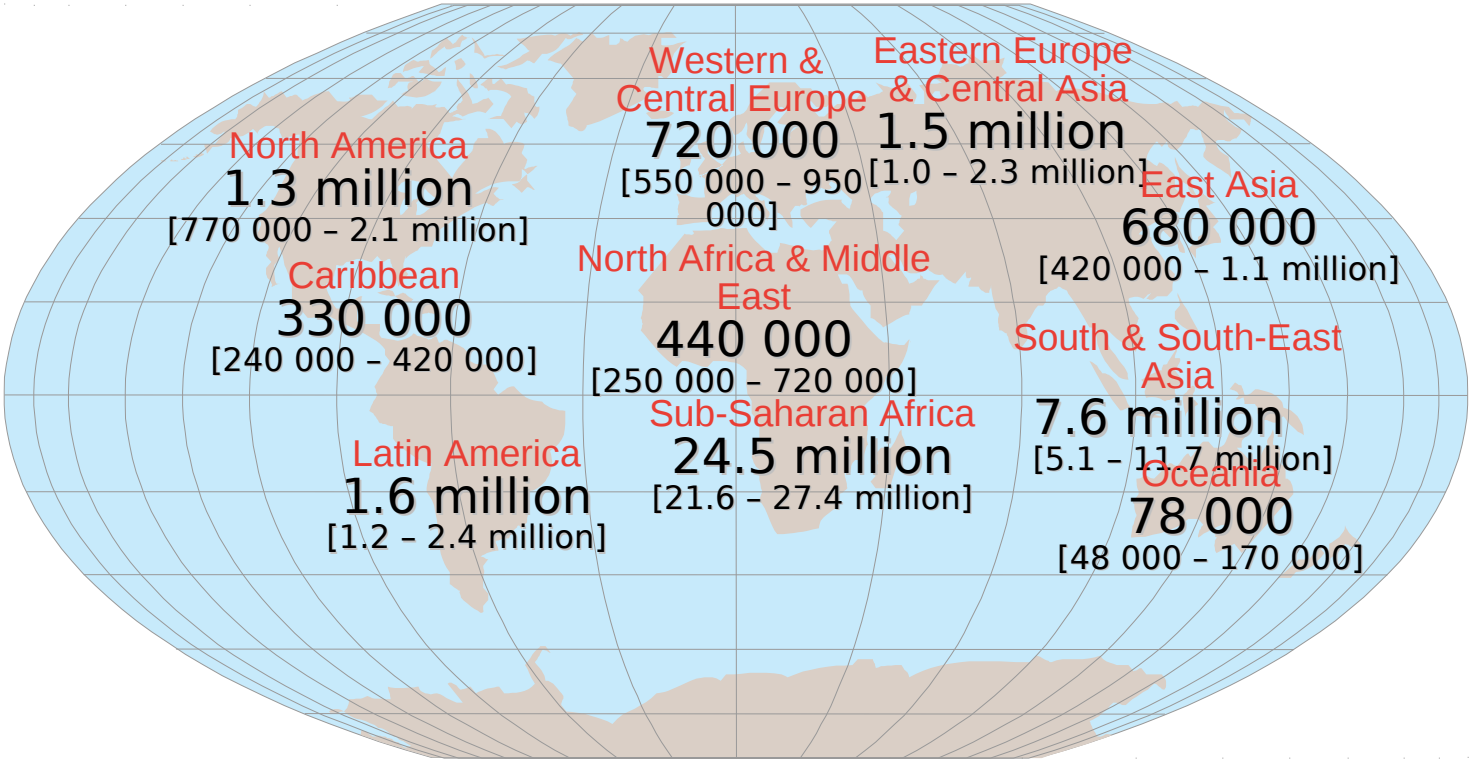
Global summary of the HIV & AIDS epidemic, 2005

Number of people living with HIV/AIDS	**Total**	**38.6 million (33.4 – 46.0 million)**
	Adults	**36.3 million (31.4 – 43.4 million)**
	Women	**17.3 million (14.8-20.6 million)**
	Children under 15	**2.3 million (1.7 – 3.5 million)**
People newly infected with HIV in 2005	**Total**	**4.1 million (3.4-6.2 million)**
	Adults	**3.6 million (3.0-5.4 million)**
	Children under 15	**540 000 (420 000 - 670 000)**
AIDS deaths in 2005	**Total**	**2.8 million (2.4-3.3 million)**
	Adults	**2.4 million (2.0-2.8 million)**
	Children under 15	**380 000 (290 000 - 500 000)**

The ranges around the estimates in this table define the boundaries within which the actual numbers lie, based on the best available information.

From: UNAIDS/WHO. AIDS Epidemic Update, 2005.

Adults and children estimated to be living with HIV, 2005



Total: 38.6 (33.4 – 46.0) million

From: UNAIDS/WHO. AIDS Epidemic Update, 2005

BURDEN OF DISEASE

- From the beginning of the HIV pandemic through 2002, four million children under 15 years of age worldwide became infected.
- 2003 → 700 000 (590 000–810 000) new cases reported. Mostly in sub-Saharan Africa.
- Majority of HIV-infected children die before their fifth birthday

  Dabis and Ekpini, 2002;

  UNAIDS/WHO, 2002 , 2003;
- First case of HIV in Malaysia → 1986.

HIV and young children

- Children get infected through their mothers
- Best prevention for children:
  - Help parents from becoming infected
  - Fathers (men) responsible for protecting family

HIV and young children -contd

- BUT, many women already infected
  - Need to try to reduce risk to babies
  - One way is to avoid breastfeeding
  - Weigh the balance against risks of not breastfeeding
- Health workers need to help HIV +ve women make decision re: best way to feed baby

Mode of transmission of HIV

- HIV is passed from an infected man or woman through:
  - Exchange of HIV infected body fluids (blood/semen/vaginal fluids) during unprotected intercouse
  - HIV infected blood transfusions or contaminated needles
  - ***Mother to child transmission (MTCT)***

3. Risk of Mother-to-Child transmission (MTCT) of HIV

Mother to Child Transmission (MTCT)

- Young children who get HIV are usually infected through their mothers:
  - during pregnancy across the placenta
  - at the time of labour and birth through blood and secretions
  - through breastfeeding
- This is called mother-to-child transmission of HIV or MTCT
- *Not all babies born to HIV infected mothers become infected with HIV*

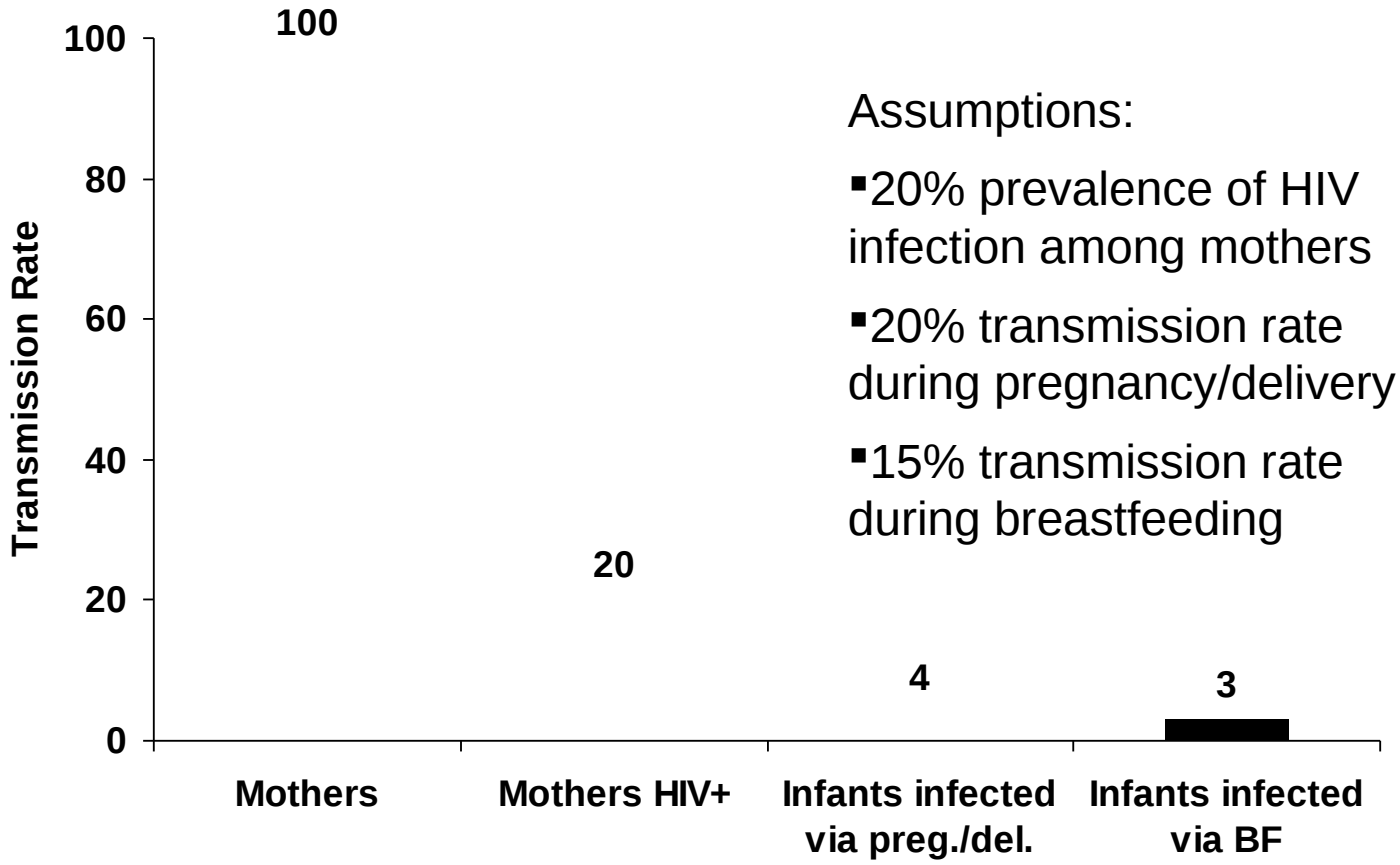
Typical presentation of risk of MTCT 2000-2003

Overall risk MTCT

- Non breastfeeding women 15-25%
- Breastfeeding to 6 months 20-35%
- Breastfeeding 18-24 months 30-45%
- Women given antiretroviral prophylaxis
  elective LSCS and no breastfeeding <2%

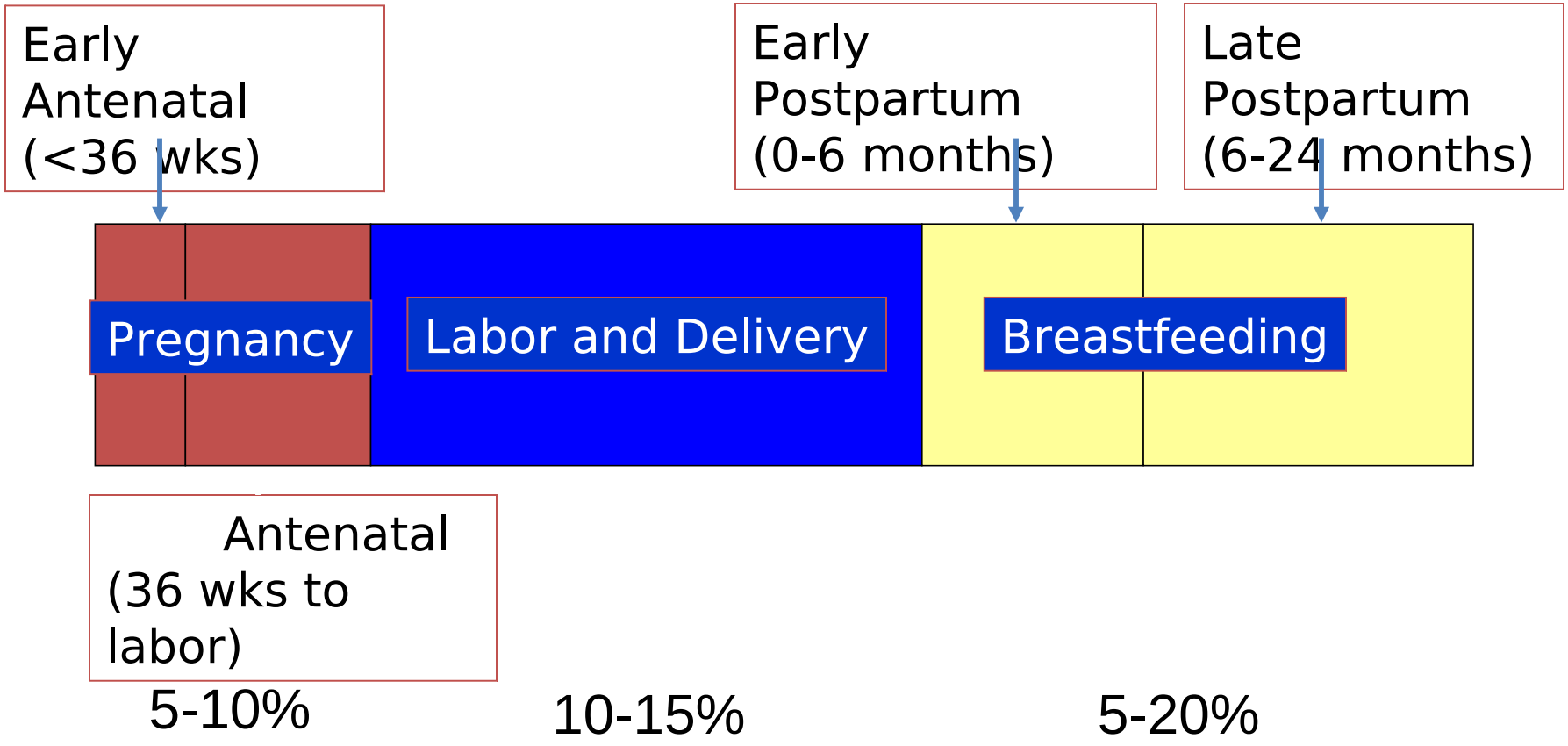
Risk from breastfeeding 15%

Risk of mother-to-child transmission of HIV

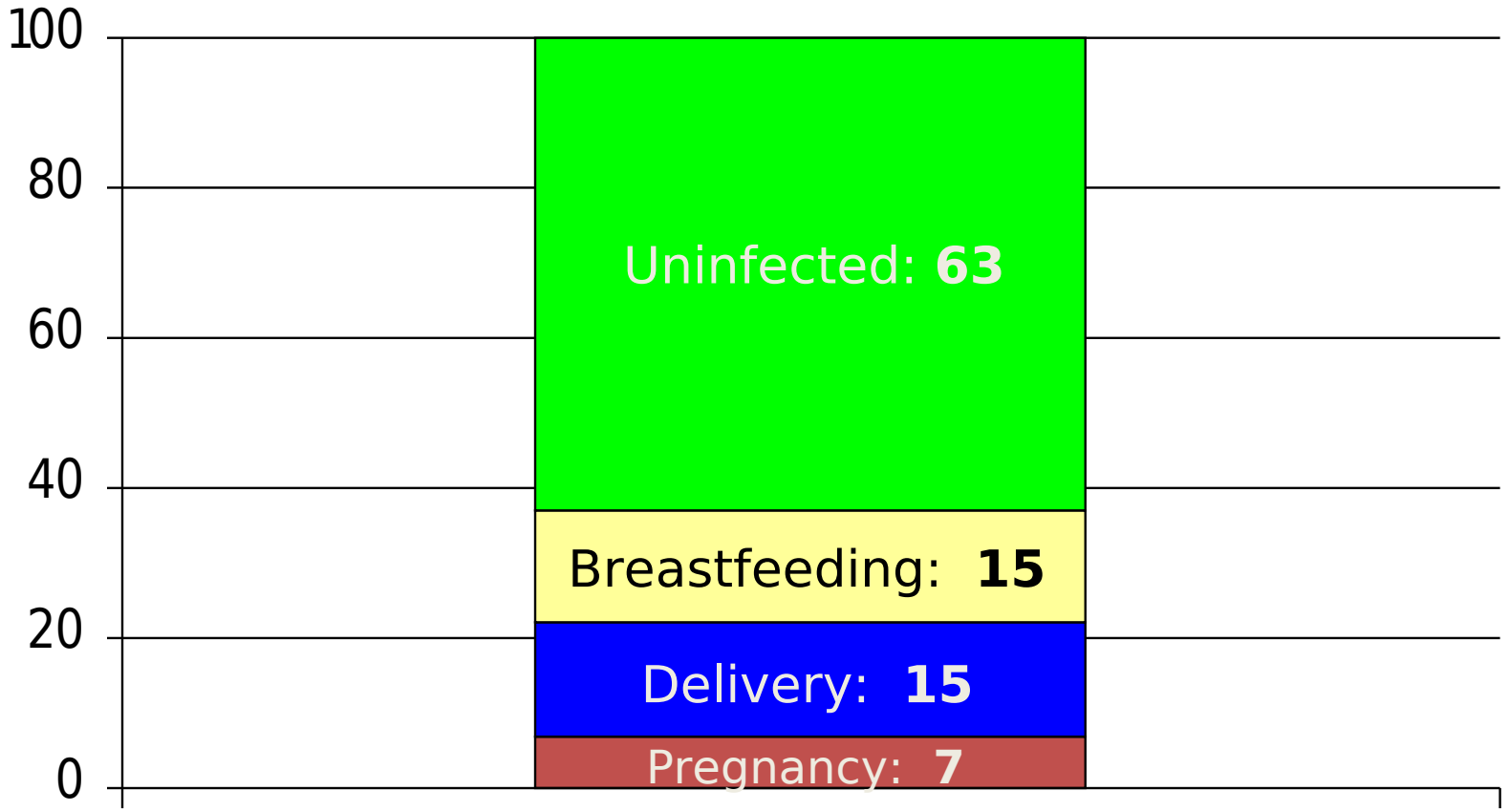


Based on data from *HIV & infant feeding counselling tools: Reference Guide.* Geneva, World Health Organization, 2005.

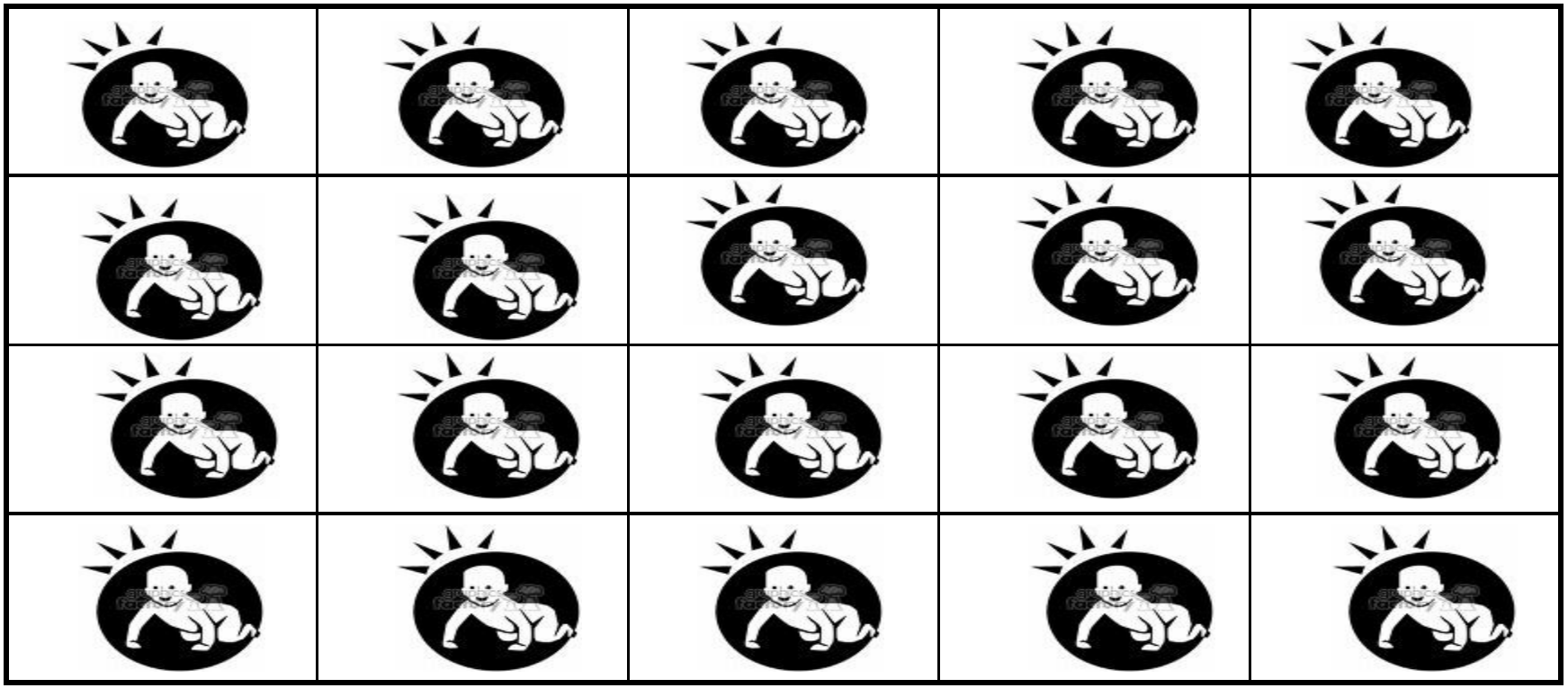
Timing of Mother-to-Child Transmission (MTCT): No intervention



Average MTCT in 100 HIV+ Mothers by Timing of Transmission



Mother to Child transmission (MTCT)

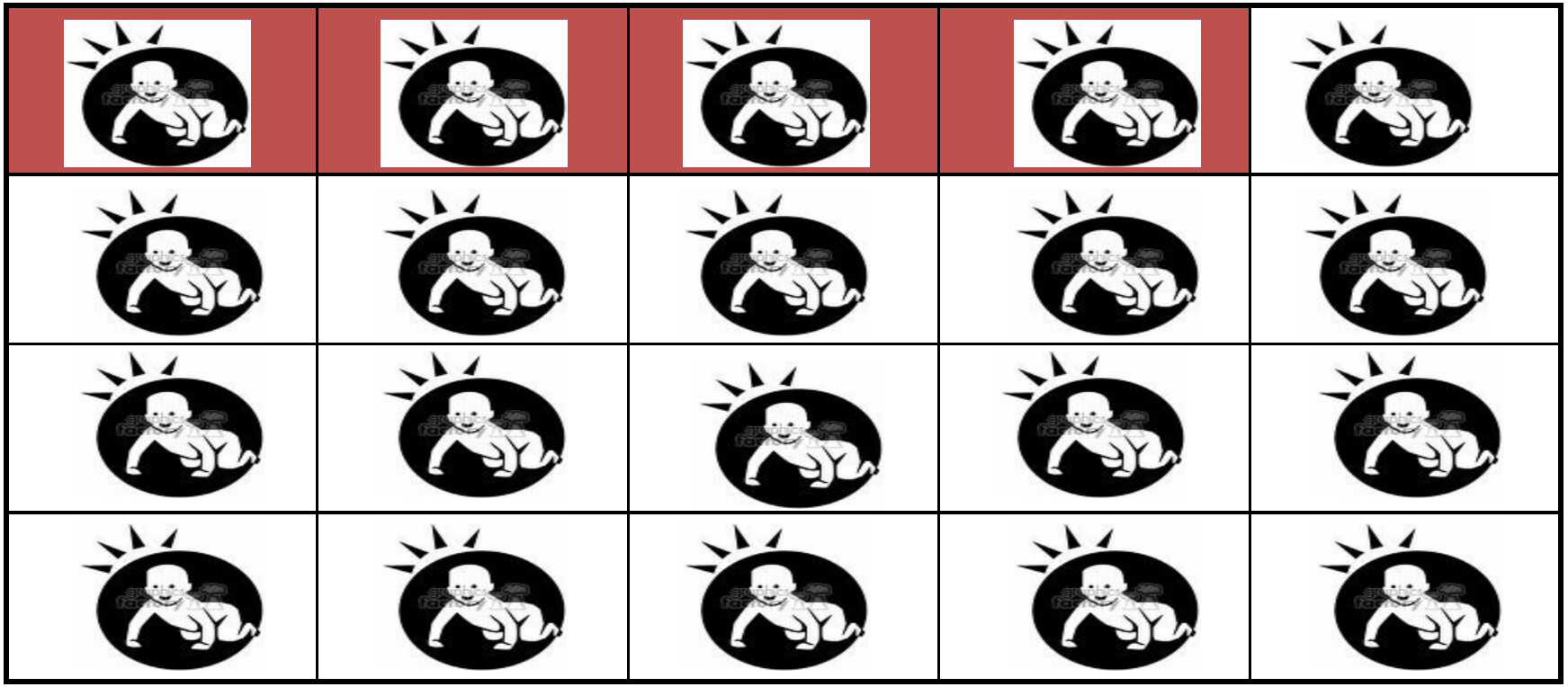


Mother to Child transmission (MTCT)

- 2/3 of infants born to HIV infected mothers will NOT be infected (even with NO intervention)
- 5-20% will get the virus through breastfeeding
  - Risk continues as long as the mother breastfeeds
- Exclusive breastfeeding during 1st few months of life carries lower risk of transmission than mixed feeding

How many of these babies were probably infected during pregnancy or delivery?

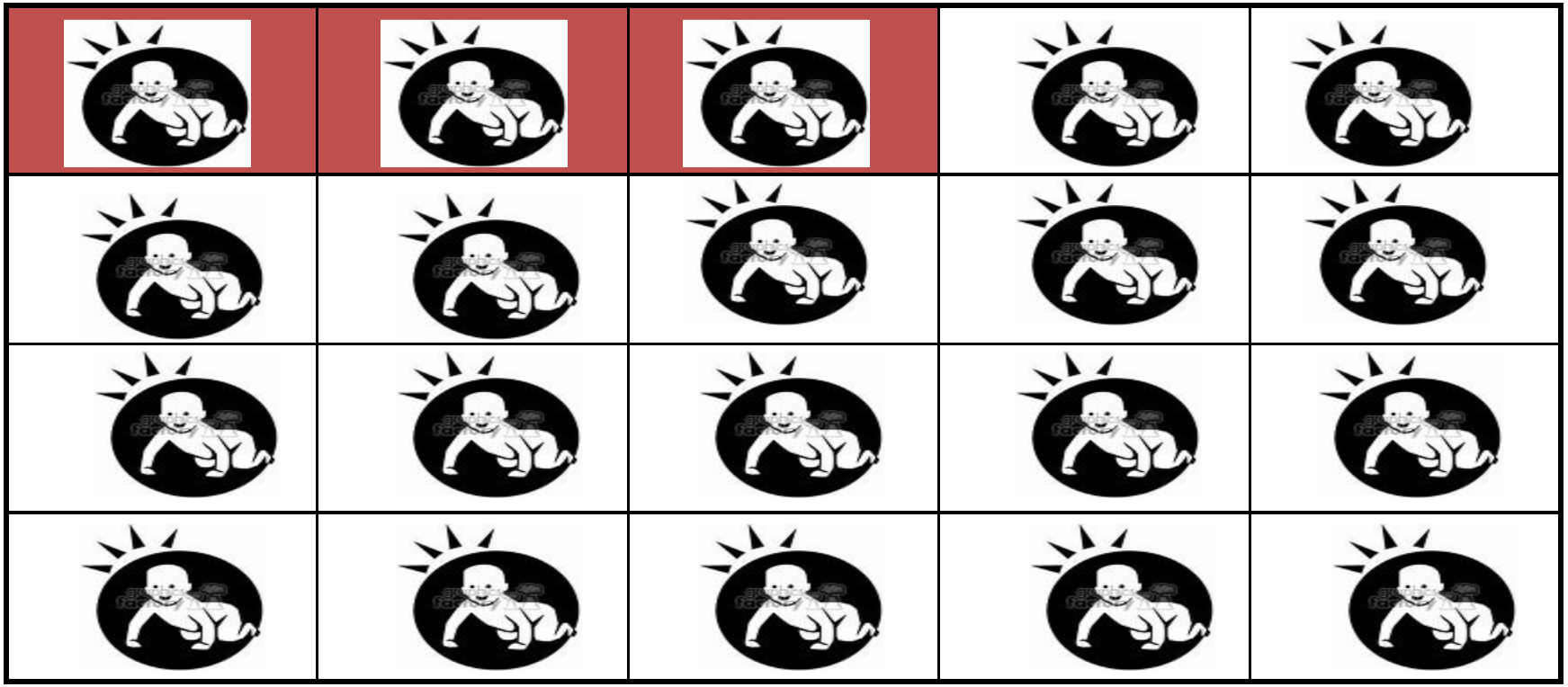
MTCT- pregnancy and delivery



- Transmission rate during pregnancy and delivery (combined) : 20%
- 20% of 20 is 4 . So: **4 infants**

How many of these babies will be infected through breastfeeding if they all breastfeed for several months?

MTCT- breastfeeding



- Transmission rate during breastfeeding: 15% (depending on how long mother breastfeeding)
- 15% of 20 is 3 . So: **3 infants**

4. Factors which influence MTCT

What are some factors that affect mother-to child transmission of HIV?

Factors which affect mother-to-child transmission

- Recent infection with HIV
- Severity of disease
- Sexually transmitted infections
- Obstetric procedures
- Duration of breastfeeding
- Mixed feeding
- Condition of the breasts
- Condition of the baby’s mouth

*Risk factors for HIV transmission during breastfeeding**

Mother

- Immune/health status
- Plasma viral load
- Breast milk virus
- Breast inflammation (mastitis, abscess, bleeding nipples)
- New HIV infection

Infant

- Age (first month)
- Breastfeeding duration
- Non-exclusive BF
- Lesions in mouth, intestine
- Pre-maturity, low birth weight
- Genetic factors – host/virus

* *Also referred to as postnatal transmission of HIV (PNT)*

HIV transmission through breastfeeding: A review of available evidence. Geneva, World Health Organization, 2004 (summarized by Ellen Piwoz).

5. Approaches to prevent MTCT through Infant Feeding Practices

Strategies to reduce risk of HIV transmission

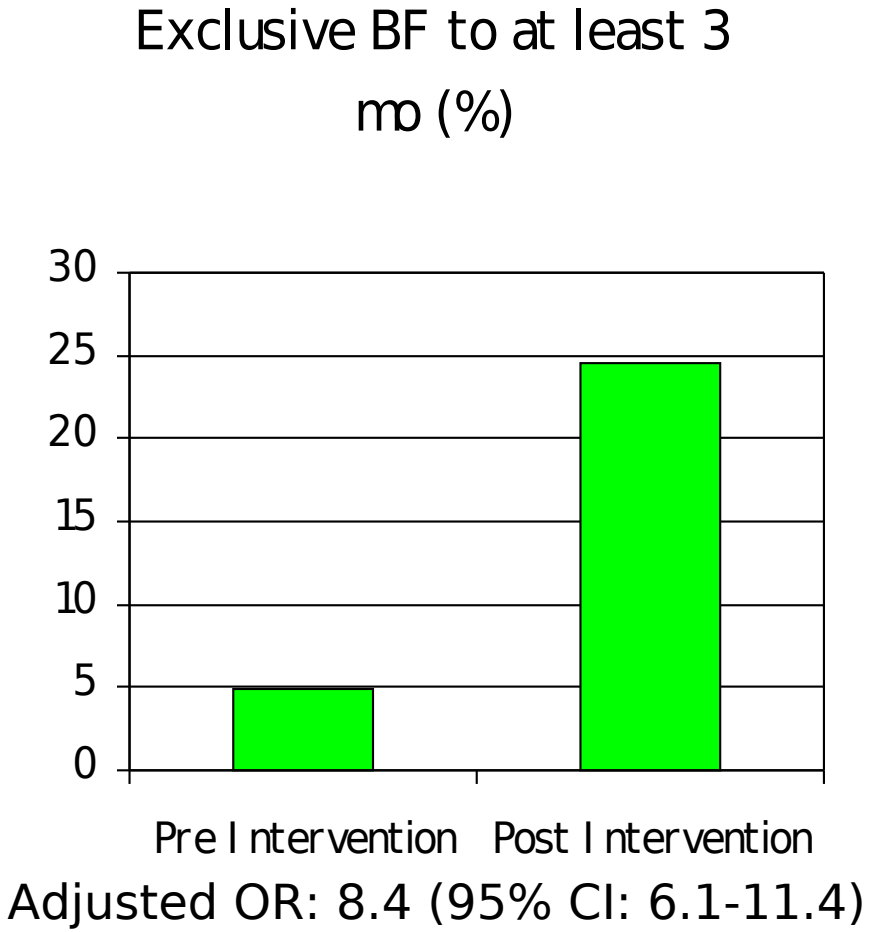
- Use risk factor list
  - Provide ways to reduce risk of HIV transmission
  - can be adopted by all women
  - Does not depend on knowing HIV status
- Replacement feeding
  - Avoidance of breastfeeding can be harmful to babies
  - Only use if HIV +ve status known and counselling given
- Use of Anti retroviral drugs
  - Zidovudine ZDV), Azidothymidine (AZT), Nevirapine

ZVITAMBO Infant Feeding Study-2

(Piwoz et al, J Nutr, 2005)

Elements of Safer Breastfeeding:

1. Exclusive BF
2. Proper positioning and attachment
3. Seek immediate attention for breast health problems
4. Practice safer sex



Adjusted OR: 8.4 (95% CI: 6.1-11.4)

6. Infant Feeding recommendations for Women who are HIV +ve, Negative and Unknown Status

HIV & infant feeding recommendations

If the mother's HIV status is positive:

- Provide access to anti-retroviral drugs to prevent MTCT and refer her for care and treatment for her own health
- Provide counselling on the risks and benefits of various infant feeding options, including the acceptability, feasibility, affordability, sustainability and safety (AFASS) of the various options.
- Assist her to choose the most appropriate option
- Provide follow-up counselling to support the mother on the feeding option she chooses

Adapted from WHO/Linkages, *Infant and Young Child Feeding: A Tool for Assessing National Practices, Policies and Programmes. Geneva,* World Health Organization, 2003 (Annex 10, p. 137).

WHO recommendations on infant feeding for HIV+ women

When replacement feeding is **A**cceptable, **F**easible, **A**ffordable, **S**ustainable and **S**afe (AFASS), avoidance of all breastfeeding by HIV-infected mothers is recommended.

Otherwise, exclusive breastfeeding is recommended during the first months of life.

To minimize HIV transmission risk, breastfeeding should be discontinued as soon as feasible, taking into account local circumstances, the individual woman's situation and the risks of replacement feeding (including infections other than HIV and malnutrition).

WHO, *New data on the prevention of mother-to-child transmission of HIV and their policy implications. Conclusions and recommendations. WHO technical consultation … Geneva, 11-13 October 2000.* Geneva, World Health Organization, 2001, p. 12.

Infant feeding option from 0-6 months for **HIV +ve** women in **MALAYSIA**

- Replacement feeding when AFASS:
  - Commercial Infant Formula

AFASS

- **A**cceptable
  - Perceive no barrier to replacement feeding
- **F**easible
  - Has adequate time,knowlege,skills and resources to prepare replacement food
- **A**ffordable
  - Able to pay for the cost of purchasing/producing, preparing replacement feed
- **S**ustainable
  - Available in continuous and uninterrupted supply
- **S**afe
  - Correctly and hygenically prepared ,stored and fed to baby

HIV & infant feeding recommendations

If the mother's HIV status is negative:

- Promote optimal feeding practices
- Talk about risks of becoming infected during pregnancy or while breastfeeding
  - Counsel her and her partner on how to avoid exposure to HIV

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HIV & infant feeding recommendations

If the mother's HIV status is unknown:

- Encourage her to obtain HIV testing and counselling
- Encourage infant feeding as if HIV -ve
  - Promote optimal feeding practices (exclusive BF for 6 months, introduction of appropriate complementary foods at about 6 months and continued BF to 24 months and beyond)
  - Reassurance of breastfeeding as safest option
- Counsel the mother and her partner on how to avoid exposure to HIV

Adapted from WHO/Linkages, *Infant and Young Child Feeding: A Tool for Assessing National Practices, Policies and Programmes. Geneva,* World Health Organization, 2003 (Annex 10, p. 137).

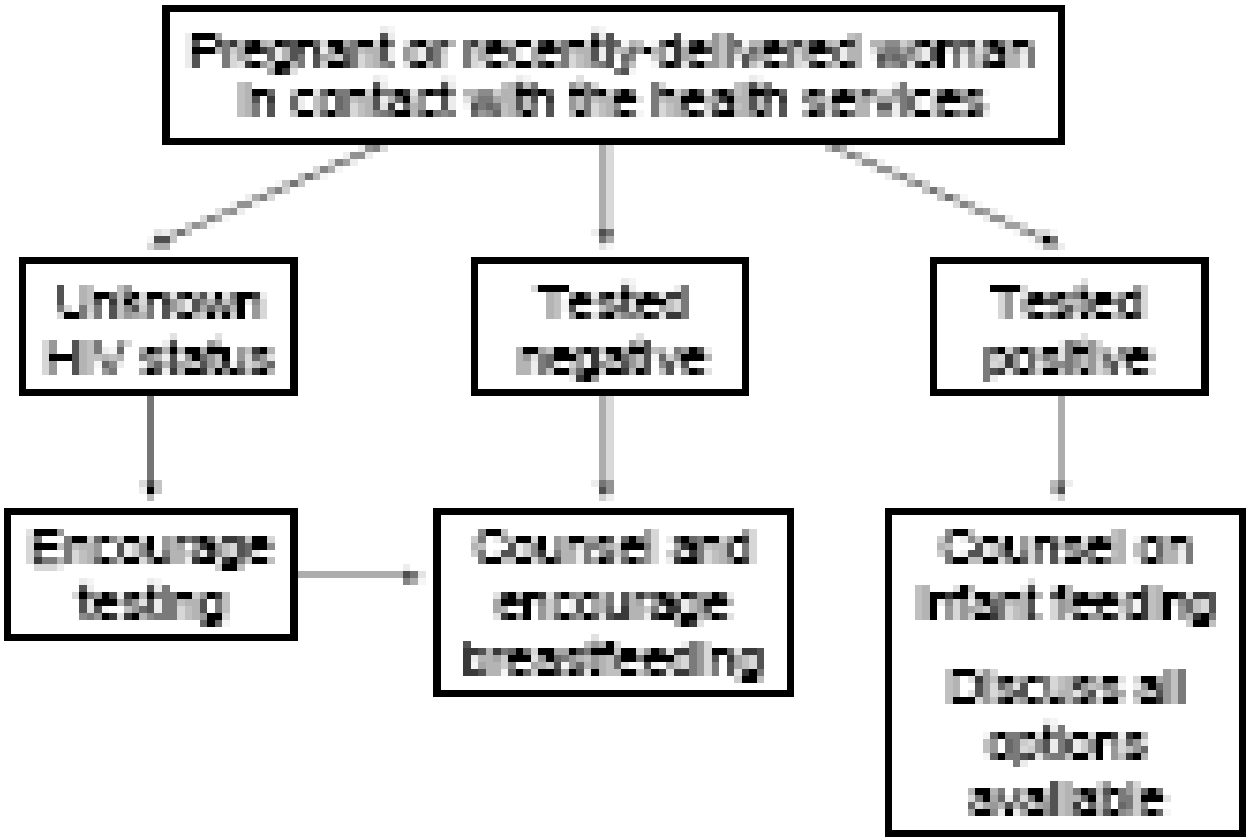
If the mother is HIV positive and chooses to breastfeed:

- Explain the need to exclusively breastfeed for the first few months with cessation when replacement feeding is AFASS
- Support her in planning and carrying out a safe transition
- Prevent and treat breast conditions and thrush in her infant

If the mother is HIV positive and chooses replacement feeding:

- Teach her replacement feeding skills, including cup-feeding and hygienic preparation and storage, away from breastfeeding mothers

Counselling for infant feeding in relation to HIV



At what point could or does infant feeding counselling take place?

Infant feeding counselling of HIV +ve women

- May be needed :
  - Before a woman is pregnant
  - During her pregnancy
  - Soon after baby born
  - Soon after receiving results of baby's HIV test and baby older
  - When a woman fosters a baby whose mother is very sick/has died
- As baby gets older/situation changes, may want to change method of feeding

7. Infant Feeding in relation to HIV

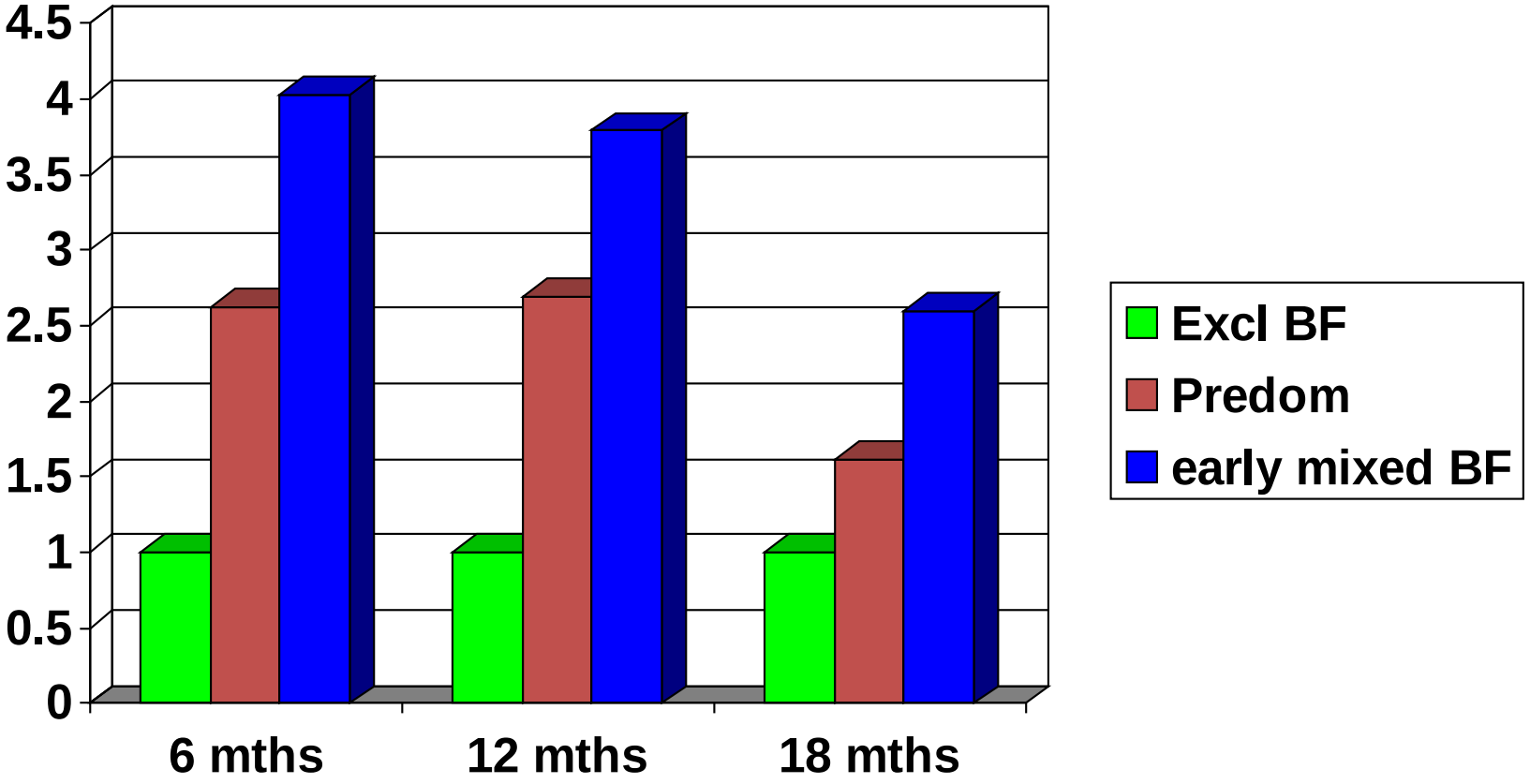
What are some elements to be considered on infant feeding in relation to HIV?

HIV and Exclusive Breastfeeding (Coutsoudis et al)

- Coutsoudis et al. Influence of infant feeding patterns on early

Results	Exclusive BF	Mixed Feeding	Formula fed/never BF
Sample size	103	288	156
HIV infected at 3 mths (95.00% CI)	**14.6%** (7-21)	24.1% (19-29)	18.8% (12-25)
Hazard ratio (P)	0.52 (0.04)	1	0.85 (0.53)

Risk of perinatal transmission (Hazard ratio) from predominant BF or early mixed feeding compared to Exclusive breastfeeding ZVITAMBO 2005 study group result



Breastmilk options for HIV +ve mothers

Advantages of **exclusive** breastfeeding

- Perfect food for babies
- Protects from many diseases esp diarrhoea, pneumonia
  - Protects from risk of dying from these diseases
- Gives babies all the nutrition and water needed
- Exclusive breastfeeding 1st 6m lowers risk of transmission of HIV vs mixed feeding
- Helps mothers recover from childbirth and protects against getting pregnant too soon

Breastmilk options for HIV +ve mothers

Disdvantages of **exclusive** breastfeeding

- Baby at risk for HIV transmission
- Mother may be pressurised into mixed feeding
- Increase risk for HIV transmission
- Mother need support to exclusively breastfeed
- May be difficult if mother works outside the home and cannot take baby with her
- May be difficult to do if mother very sick

Important points

- If a woman choose to breastfeed
  - Important to breastfeed EXCLUSIVELY
- Counselling need to take into account disease progression
- HIV +ve mothers need to use good technique to prevent nipple fissures/mastitis to reduce risk of HIV transmission

Early cessation

- ?what is the most appropriate time
- Depends on mother's particular situation
  - 0-6 mths
  - As soon as replacement feeding is ***AFASS***
- Needs guidance about cessation and replacement feeding
- Needs support for the decision
- Help mother to plan in advance
- Help for safe transition

Transition period

- when mother stops breastfeeding and change to replacement feeding
- Ensure replacement feeding available
- If not, consider other breastmilk options:
  - EBM +heat treating from 6 mths onwards
- For some infants, risk of malnutrition and other morbidity may still be greater if not receiving breastmilk c/t risk of HIV transmission via breastfeeding:
  - Continue breastfeeding even after 6 mths

SUMMARY

- Not all infants born to HIV mothers will be infected with HIV
- About 20% babies born to HIV+ve mothers will become infected through breastfeeding
- To reduce risk –
  - do not breastfeed or
  - Breastfeed exclusively for 6 mths
- Women need access to infant feeding counselling to help them decide the best way to feed their child
- Mixed feeding should be avoided
  - Increase risks of HIV infection
  - Increase risks for diarrhoea and other diseases
- Breastfeeding should continue to be protected, promoted and supported in all populations

THANK YOU