Considerations for Children of HIV-Infected Mothers

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Infant feeding in the HIV Context

- What is the objective?
  - ✓ Reduction of MTCT
  - ✓ Reduction of overall mortality including MTCT, malnutrition and diarrhea and other illnesses)
  - ✓ Support to PLWHA and their families
  - ✓ Increase access and uptake of services?
- Operational targets:
  - ✓ Innocent declaration, world health assembly resolutions, BFHI, The code of marketing BM substitutes

Magnitude of HIV in children

- 10.5 million deaths annually in children under 5 years
- 600,000 - 800,000 new infant HIV infections (Global)
- 2.7 million children living with HIV
- 580,000 HIV related deaths among children aged < 15 years
- 14 million children orphaned by HIV/AIDS

WHO, UNAIDS 2002 Global AIDS report

Estimated impact of AIDS on U-5 child mortality

US Bureau of the Census 2000

Timing of mother-to-child transmission of HIV(2) (de Cock, JAMA,2000)

	Absolute risk of Transmission
During pregnancy	5-10%
During labor and delivery	10-20%
During breastfeeding	5-20%

Median Duration of Breastfeeding

Sub-Saharan Africa: 21 months

Near East/North Africa: 14.8 months

Asia: 21.3 months

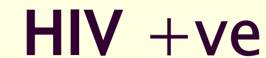
Latin America/Caribbean: 13.9 months

Source: DHS 1990–1996

Infant feeding Guidelines

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS), recommend avoidance of all BF by HIV+ mothers
- Otherwise:
    - Exclusive BF to age 6 months
- At age 6 months, if unknown HIV status or known uninfected:
    - Counsel to stop BF as soon as feasible (taking into account local circumstances, individual woman's situation, and risks of replacement feeding)
    - Appropriate milk substitute and safe and appropriate complementary foods
- At age 6 months, if known to be HIV-infected:
    - Continue to BF up to 2 years or beyond
    - Safe and appropriate complementary food introduction

Infant Feeding Counseling



HIV status unknown

Prevention

EBF

VCT counseling

Complementary feeding

HIV –ve

Prevention

EBF

VCT counseling

Complementary feeding

HIV +**ve**

Prevention

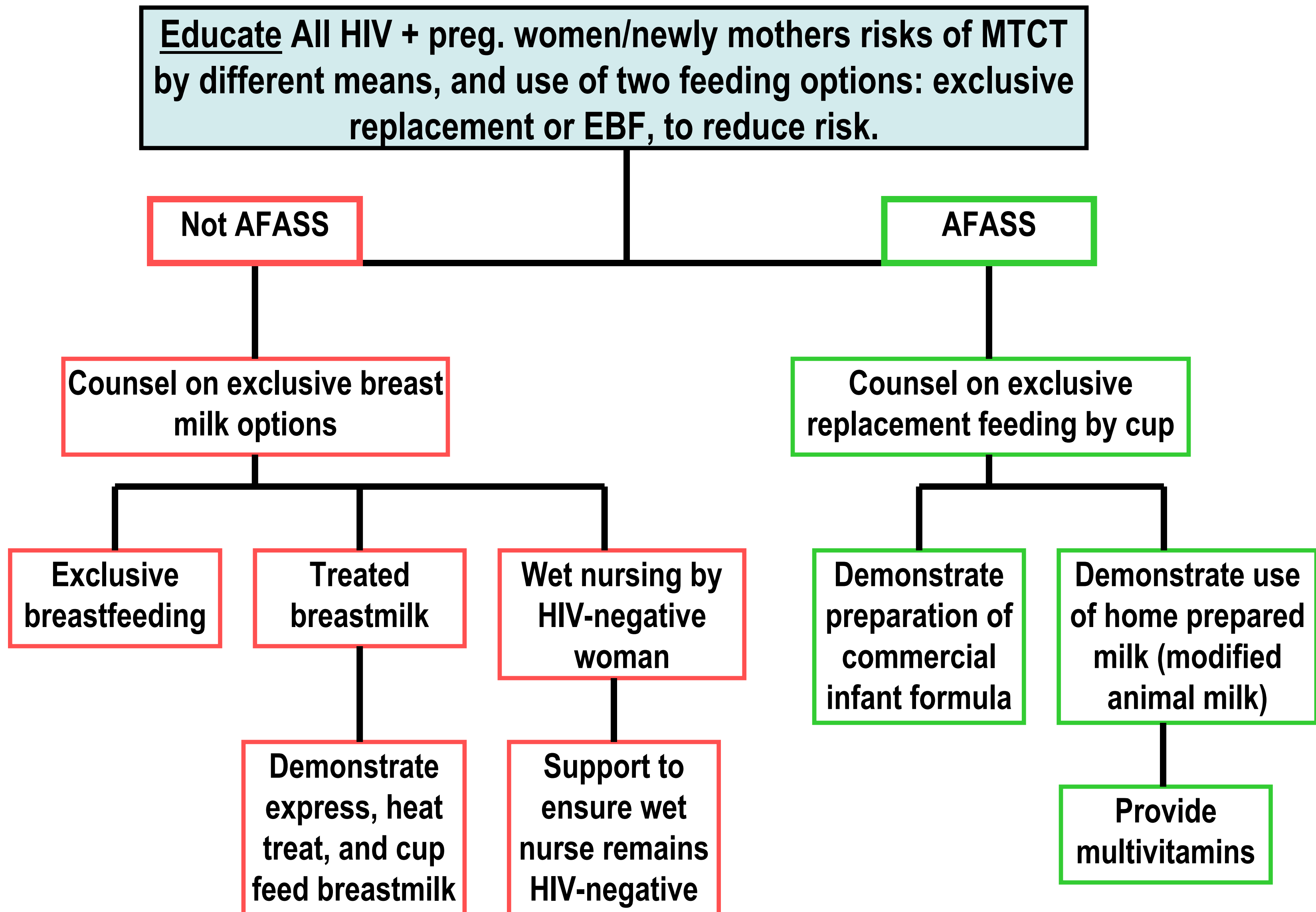
Feeding options: EBF, early cessation, replacement feeding

Complementary feeding

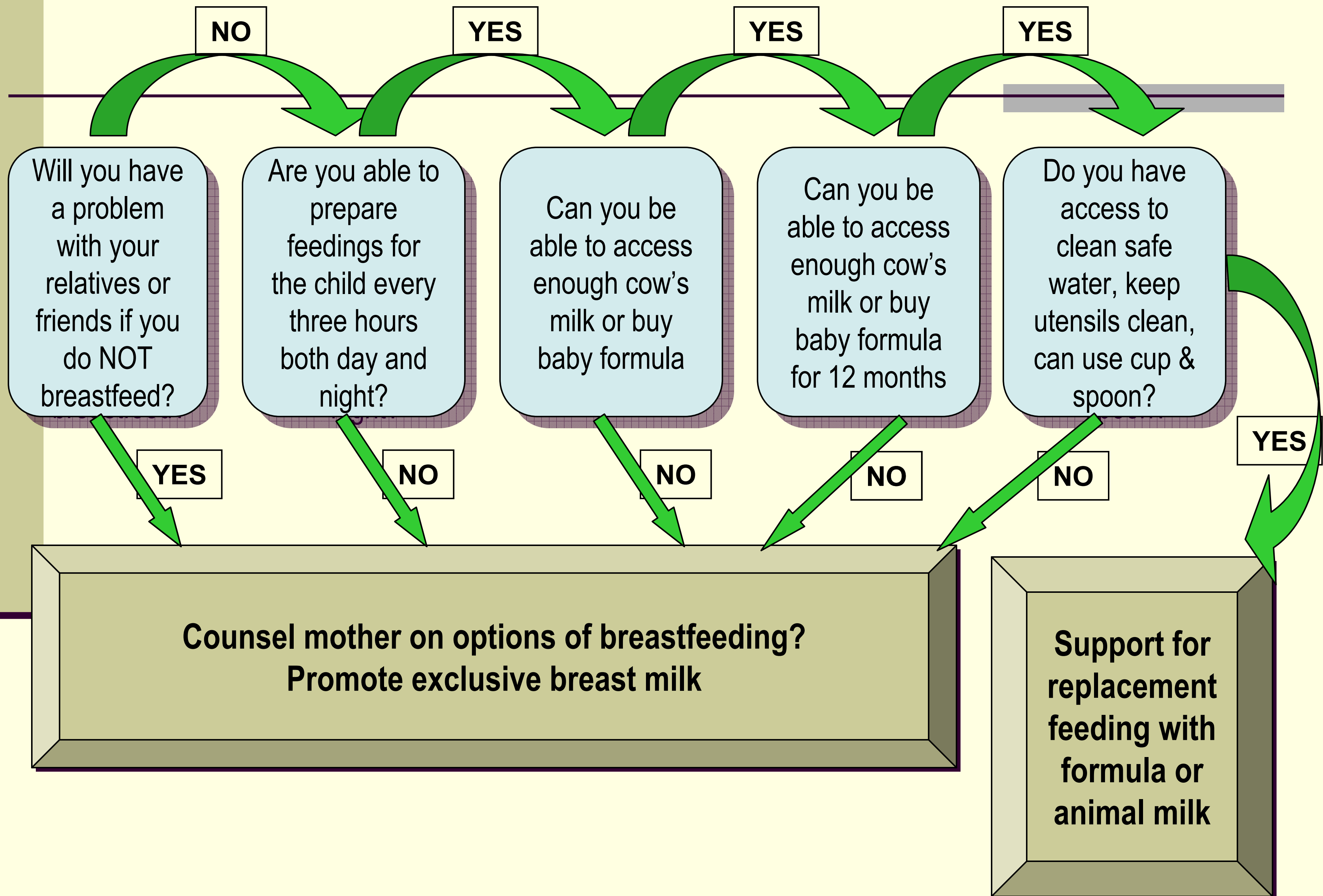
BF problems treatment

Antiretroviral

Infant feeding Options for HIV-positive women.



Evaluation of AFASS

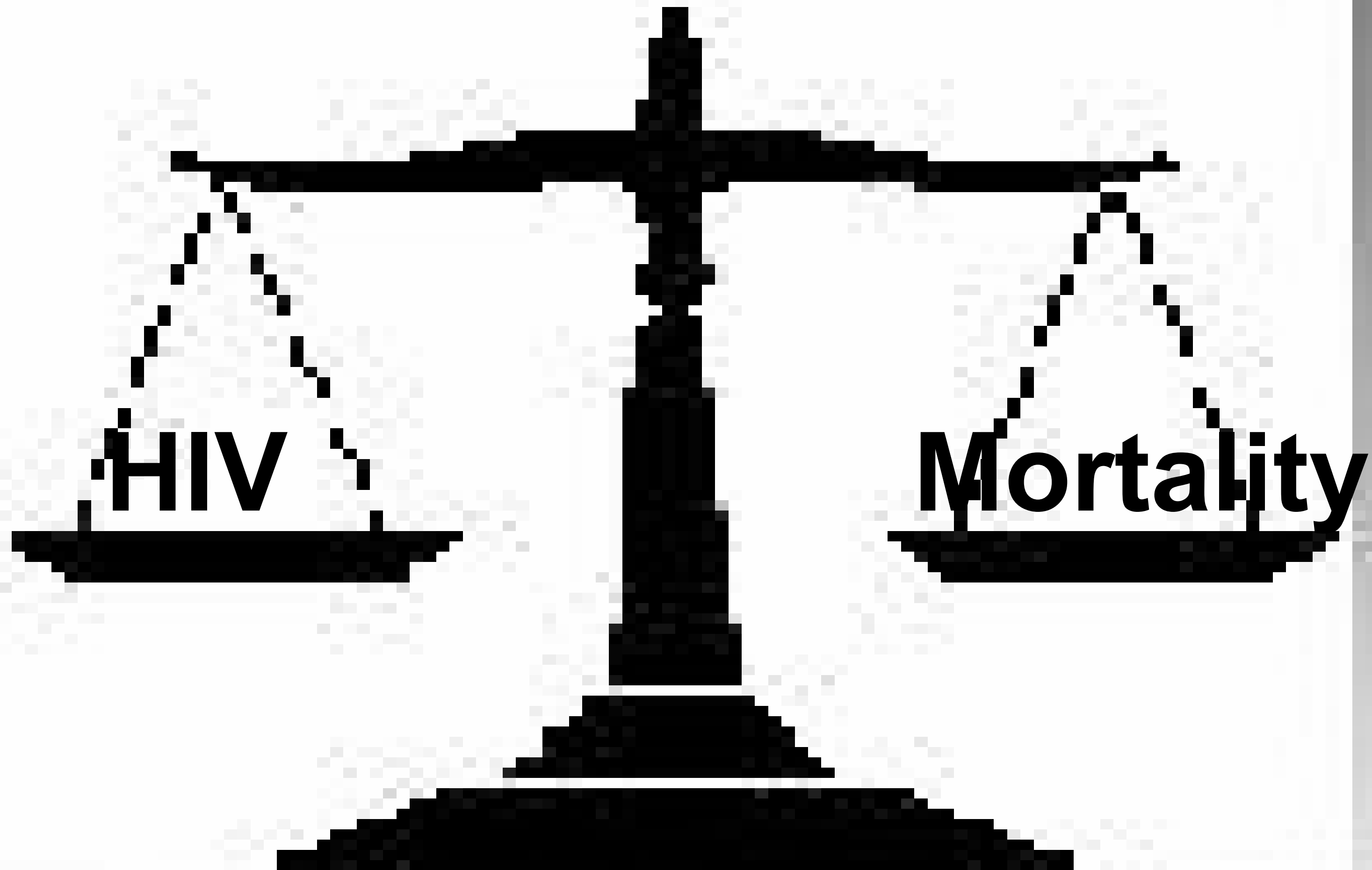


Informed Choice

"HIV and breastfeeding policy supports breastfeeding for infants of women without HIV infection or of unknown status and the right of a woman infected with HIV who is informed of her sero-status to choose an infant feeding strategy based on full information about the risks and benefits of each alternative."

UNAIDS/WHO/UNICEF

Breastfeeding Formula



Supporting a mother's choice based on her AFASS

- Experiences from Botswana (MOH, 2001), Zambia and Rwanda (UNICEF, 2002) show poor risk assessment (AFASS) and biased counseling (often favoring formula)

- Formula uptake: How serious are short interruptions after 6 months?

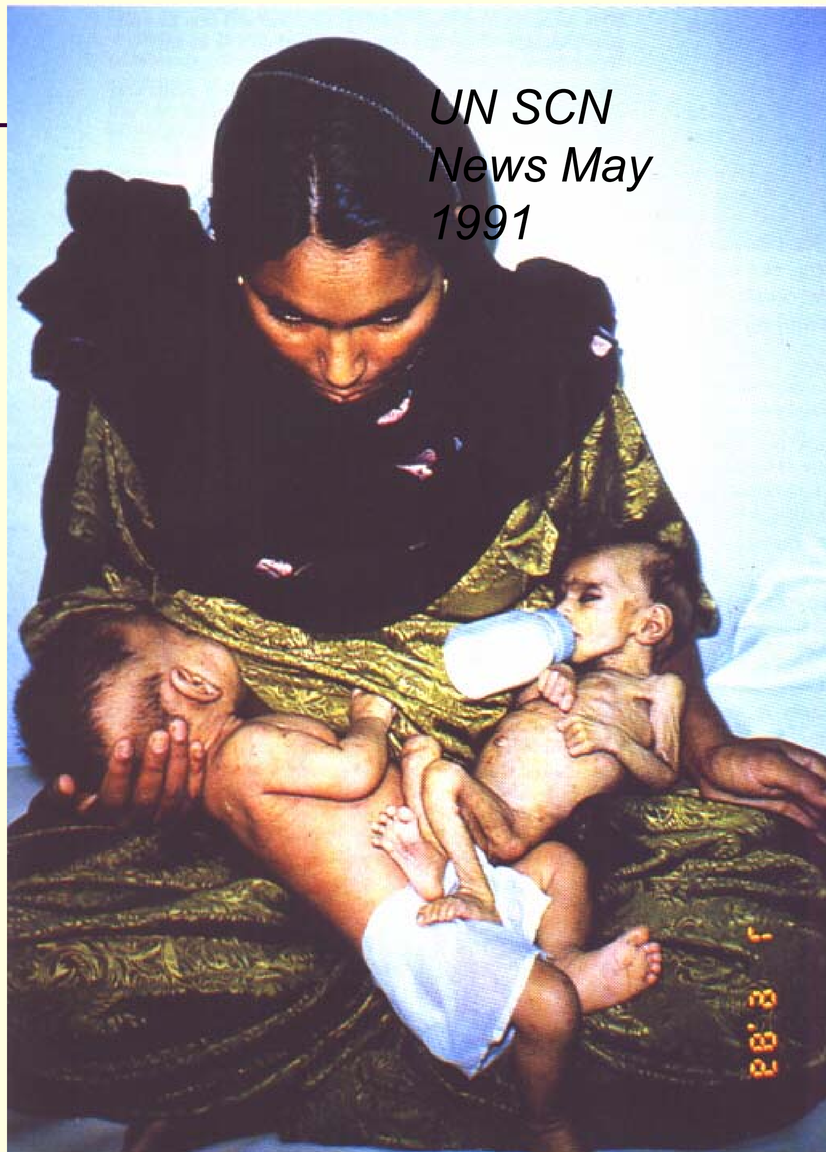
Are the AFASS factors also relevant after 6 months and if they are, how do they differ**? **Is safety much of an issue?

Acceptability issues provide a major challenge for mothers

- In Zambia (Horizons, 2001): main reason for not taking free formula included various social and convenience related factors
- In Zambia, Kenya and Botswana (Horizons, 2001; Tlou, 2000): Uptake of free formula was positively associated with partner involvement

Is not breastfeeding acceptable/very difficult after 6 months?
What about abrupt weaning?

Mixed feeding is always the worse option



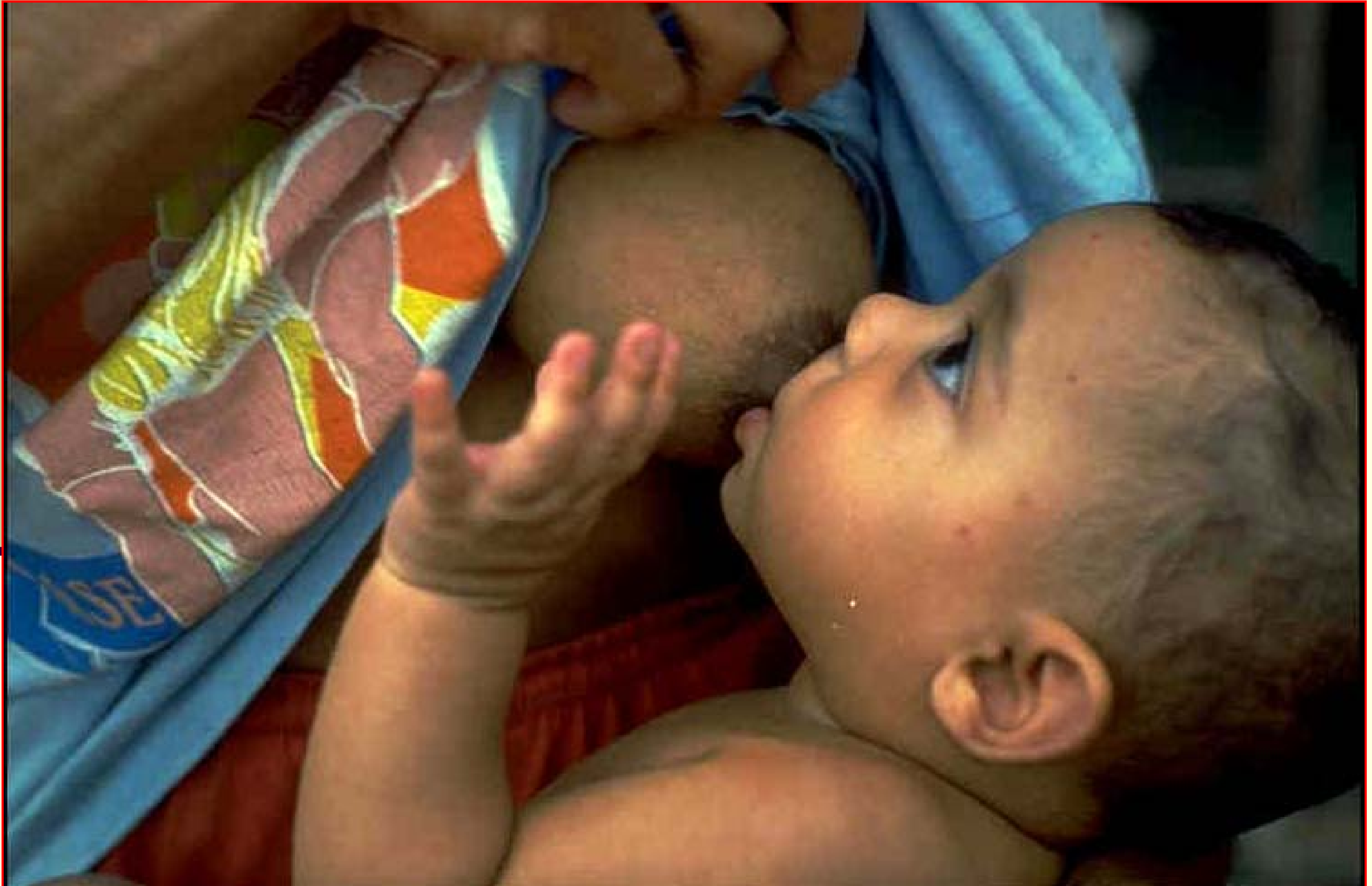
several clinical studies have shown that :

Exclusive breastfeeding carries a lower risk of mother to child HIV transmission than `mixed` feeding, where infants are breastfed but also receive water and other foods.

The risk of HIV transmission through breastfeeding remains relatively constant after day 28 of breastfeeding, so the longer the breastfeeding period lasts, the higher the risk of HIV transmission.

Use my picture," I don't want other people to make The same Mistake"

MAKING BREASTFEEDING SAFE CONTINUES TO BE A CHALLENGE IN PREVENTION OF MTCT OF HIV

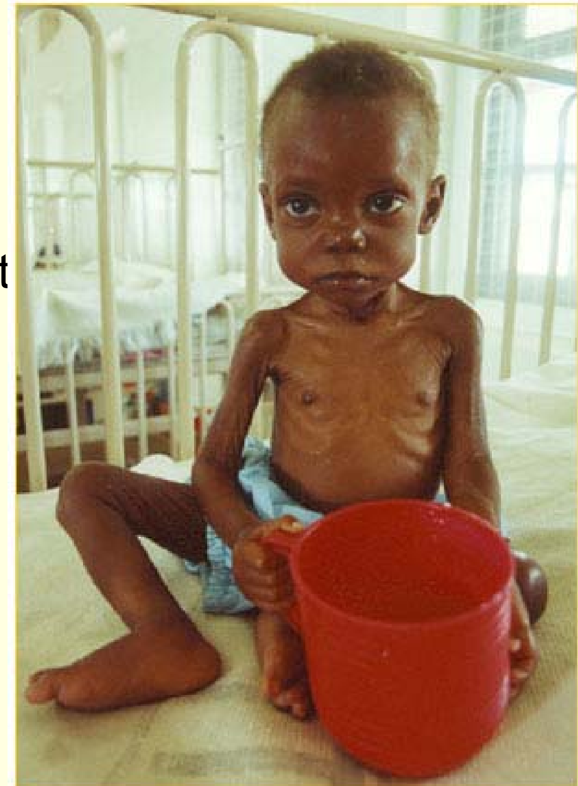


In the HIV context

- Replacement and not weaning foods are introduced (note impt. of milk)
  - Before 6 months – Fomular /E. breast Milk
  - After six months
    - replacement milk and other foods (depending on HIV status)
  - AFASS must apply
  - Difficult to make Smooth transition after BF
  - Milk volumes required by the infant

Vulnerability to malnutrition

- If child is mixed fed
- Most vulnerable period remains transition period
- High proportion of infants (21%) underweight at 9 and 12 months (CDC 2006)
- Risk factors for being underweight include:
  - hygiene and safe water
  - Exposure to HIv
  - Inadequate/inappropriate weaning foods



Suitable replacement feeds

- Modified infant formula (Cow milk formula, Soy milk formula, special formulas)
- Home modification of whole cow's milk + micronutrients
- Other considerations - AFASS

Considerations for weaning

- Gradual introduction of foods
- One new feed at a time
- Frequency of feeding (snacks required)
- Consistency and digestibility of introduced feeds
- Variety in texture taste and color
- Nutritional adequacy

Feeding the Non-Breastfed Child – 6-24 months

Age	Kcal	Feeding frequency
6-8 months	600/day	Meals 4-5 times a day Snacks 1-2 times a day
9-11 months	700/day	Meals 4-5 times a day Snacks 1-2 times a day
12-23 months	900/day	Meals 4-5 times a day Snacks 1-2 times a day

*Meals include milk-only feeds, other foods and combinations of milk feeds and other foods. Snacks are foods eaten between meals.

Source: WHO, 2005

Recommended Increased Energy Intake for HIV-Infected Children

Phase of Infection	Recommended Energy Increases
Asymptomatic	10 %
Symptomatic with no weight loss	20-30%
Symptomatic with weight loss	50-100%

Source: WHO, 2003

Can we make a difference.

✓We need to come up with something that is well tolerated by indigenous groups

✓require no further reconstitution or preparation

✓suitable for use as not only a weaning food, but a general nutritional supplement for infants, which can be further integrated easily to include adults, pregnant and lactating women, and even the elderly.

✓require no knowledge of hygiene and sterilization of feeding vessels

✓eliminate the need for preparation and mixture procedures

✓easy to transport, store and distribute

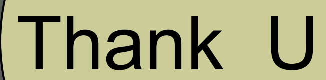
✓ready for immediate consumption

✓can be associated with health programs and used on an incentive basis

Some food for thought

- Soy foods can play an important role in enhancing the nutritional value and acceptance of replacement feeds.
  - How about ready to drink soy infant formula for replacement feeding
  - And fortified soy blends (small scale local production)
  - Improved recipes, nutrition education, safe water and sanitation & economic empowerment of women

Photo: Carolyn Kruger


Thank U