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Maternal and Child Health
Integrated Program

Maximizing Opportunities: Integrating Maternal, Infant and Young Child Nutrition and Family Planning

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CORE October 13, 2011

The Maternal and Child Health Integrated Program (MCHIP)

- USAID Bureau for Global Health's flagship maternal, newborn and child health program
- Working in well over 30 countries worldwide
- MCHIP supports programming and opportunities for integration in:
 - Maternal, Newborn and Child Health
 - Immunization, Family Planning, Malaria, HIV/AIDS
 - Wat/San, Urban Health, Health Systems Strengthening



Presentation Objectives

- Review literature on pregnancy spacing and impact on infant/child well-being
- Risks of unintended pregnancy during first 2 years post-delivery
- Strategic alignment

Short BTPI intervals increase risk for adverse maternal, infant/child outcomes

- Mortality
- Preterm birth
- Low birth weight infants
- Stunting
- Underweight

Conde Agudelo 2002; Rutstein 2005,
De Vanzo 2008



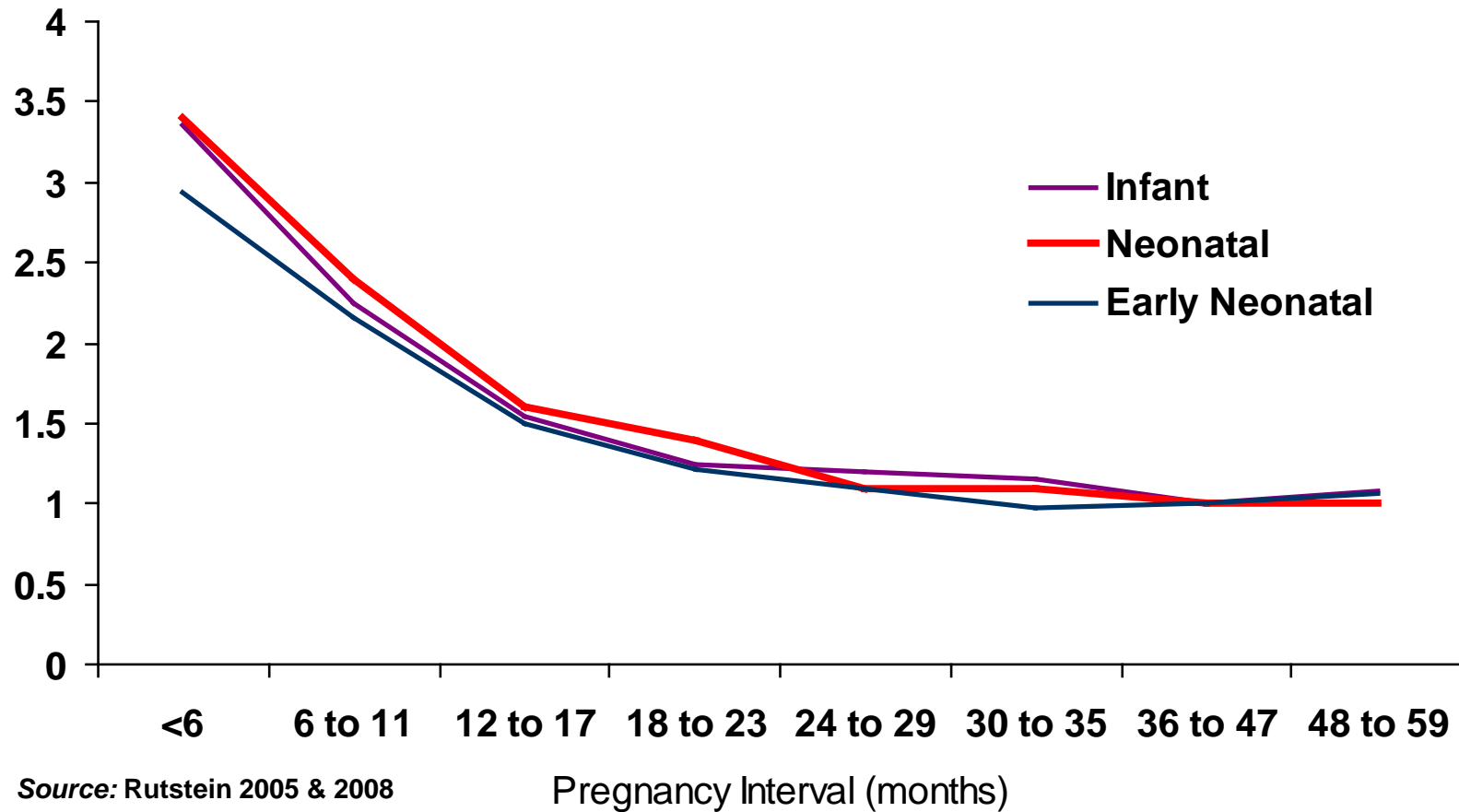
© 2006 Tom Otieno/Afrishot 21, Courtesy of Photoshare

Rutstein SO. 2008. Further evidence of the effects of preceding birth intervals on neonatal, infant, and under-five-years mortality and nutritional status in developing countries: Evidence from the Demographic and Health Surveys. *DHS Working Papers, Demographic and Health Research (41)*.

- Effects of birth-to-pregnancy interval (BTPI) for infant/child mortality
 - 52 DHS surveys from 2000-2005 (1,123,454 births)
 - Risk of mortality is highest for very short intervals (<12 months BTPI) but relatively few children conceived at such intervals (14 %)
 - But more BTPI 12-35 months (42% of total) and @ risk
- **If all couples waited 24 months to conceive again, <5 CMR ↓ 13%**
- **If couples waited 36 months <5 CMR ↓ 25%**

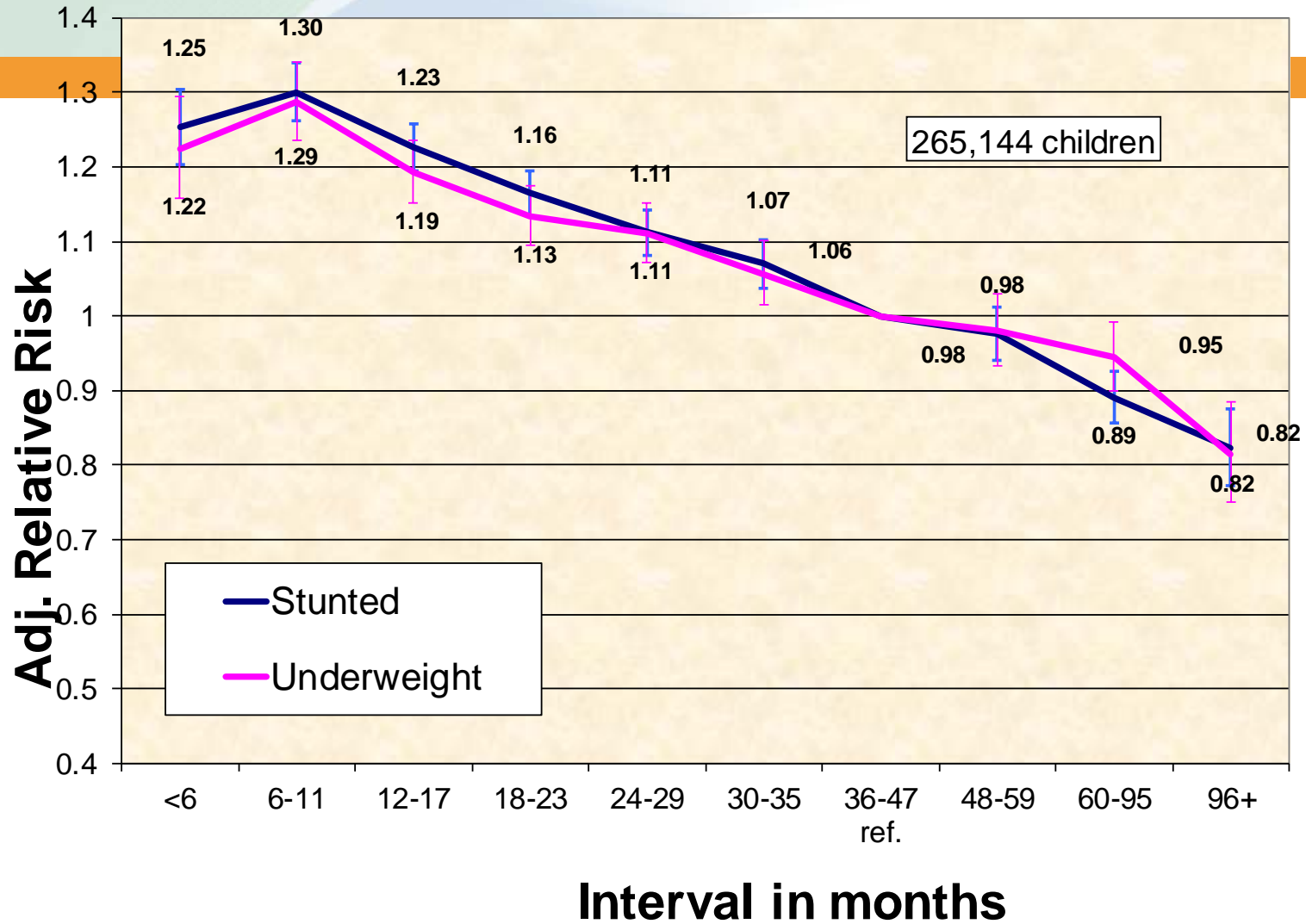
Birth to Pregnancy Intervals & Relative Risk of Neonatal and Infant Mortality

Mortality Risk




Source: Rutstein 2005 & 2008

Child Malnutrition by Birth to Conception Interval



What is Healthy Timing of Pregnancy?


- For the healthiest pregnancy outcome:
 - Young women should wait until they are at least 18 before conceiving
 - After giving birth, couples should wait at least 2 years (24 months) after giving birth before conceiving again
 - After a miscarriage, couples should wait at least 6 months before conceiving again



Dewey KG, Cohen RJ. 2007. Does birth spacing affect maternal or child nutritional status? A systematic literature review. *Maternal and Child Nutrition* 3(3): 151–173.

Child nutrition studies with longer birth interval are associated with a lower risk of malnutrition in some populations, but not all

- Reduction in stunting associated with a previous birth interval ≥ 36 months ranged from 10% to 50%
- May be due to residual confounding, BF and/or maternal height
- Maternal anthropometric outcomes yielded mixed results - further research needed



Becker S, Ahmed S, 2001. Dynamics of contraceptive use and breastfeeding during the postpartum period in Peru and Indonesia. *Population Studies* (55): 165–179.

Analysis of DHS data from Peru & Indonesia

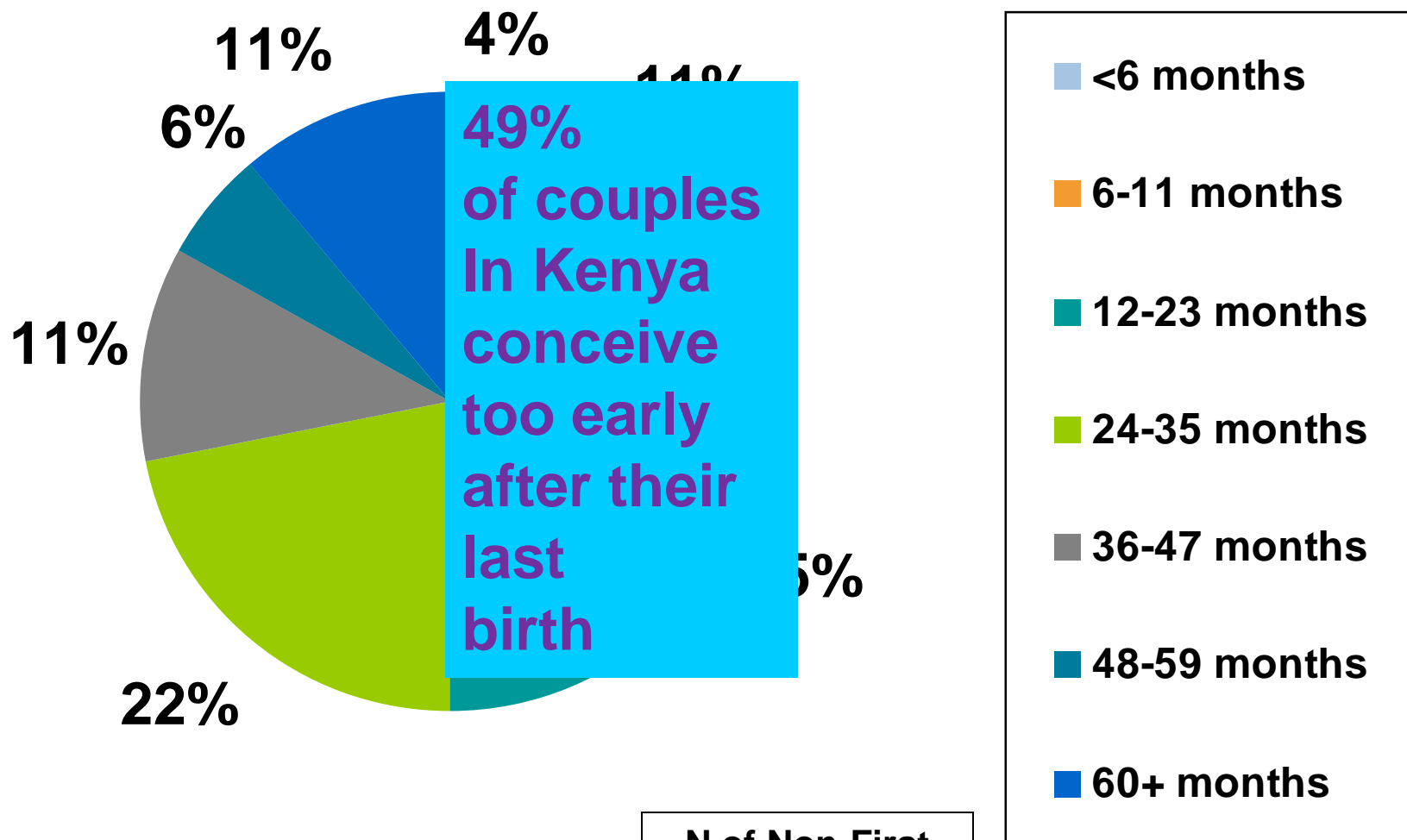
- BF women < likely to have resumed sexual intercourse in the early PP in both countries than non-BF women
- FP uptake highest after resumption of menses
- 10% subsequent pregnancies occurred before menses

Jakobsen MS, et al. 2003. Termination of breastfeeding after 12 months of age due to a new pregnancy and other causes is associated with increased mortality in Guinea-Bissau. *International Journal of Epidemiology*; 32:92–96.

Assessment of BF and child health in Guinea-Bissau

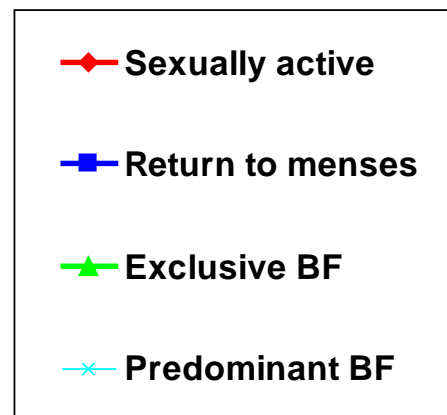
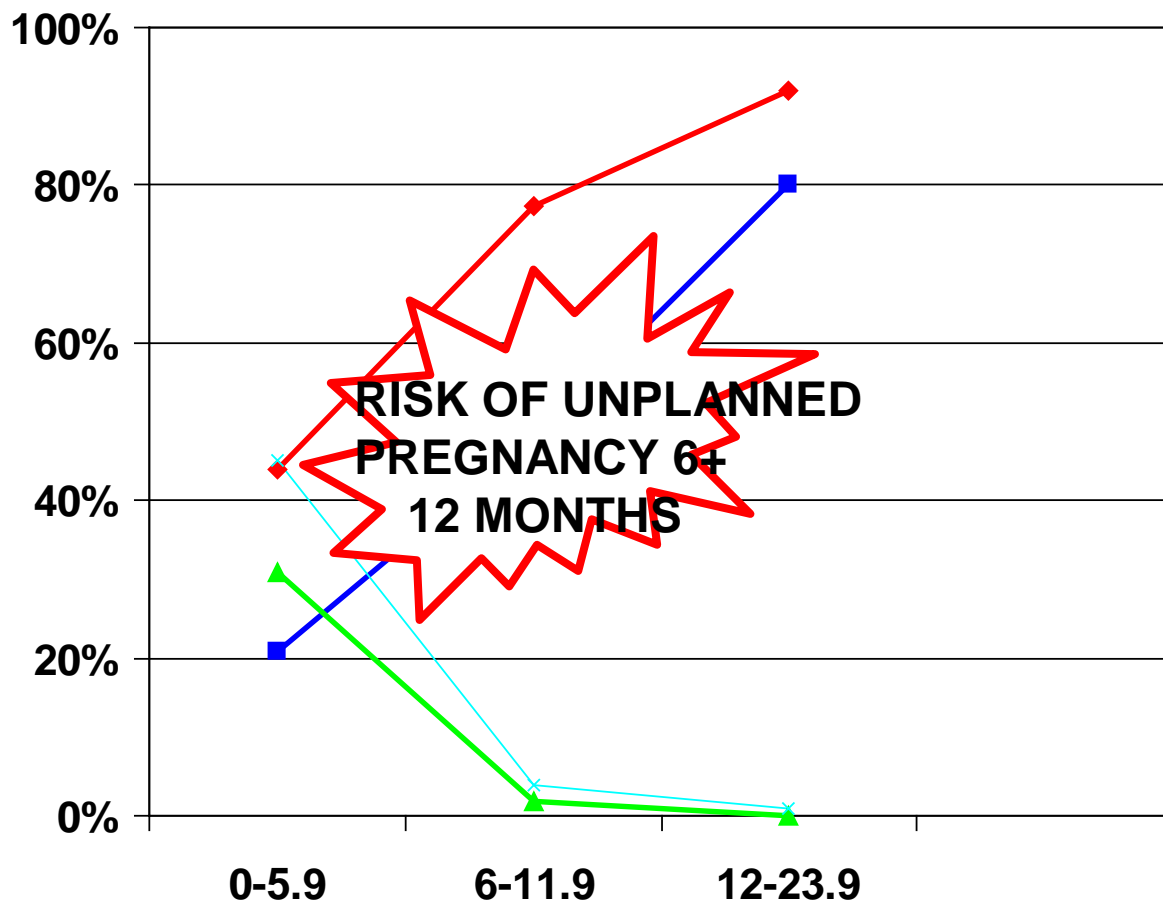
- Mother's reason for weaning & impact on child mortality (N=1423 children who terminated BF after 12 months)
- 62% weaned: 'healthy'
- all other causes of weaning were associated with a higher mortality ratio (MR) = 2.97
- 237 children weaned due to a new pregnancy (MR = 3.25)
- **Weaning due to new pregnancy of the mother is associated with highest mortality**

Birth-to-Conception Spacing Among All Women Aged 15-49, All Non-first Births in the Last 5 years Kenya DHS 2008



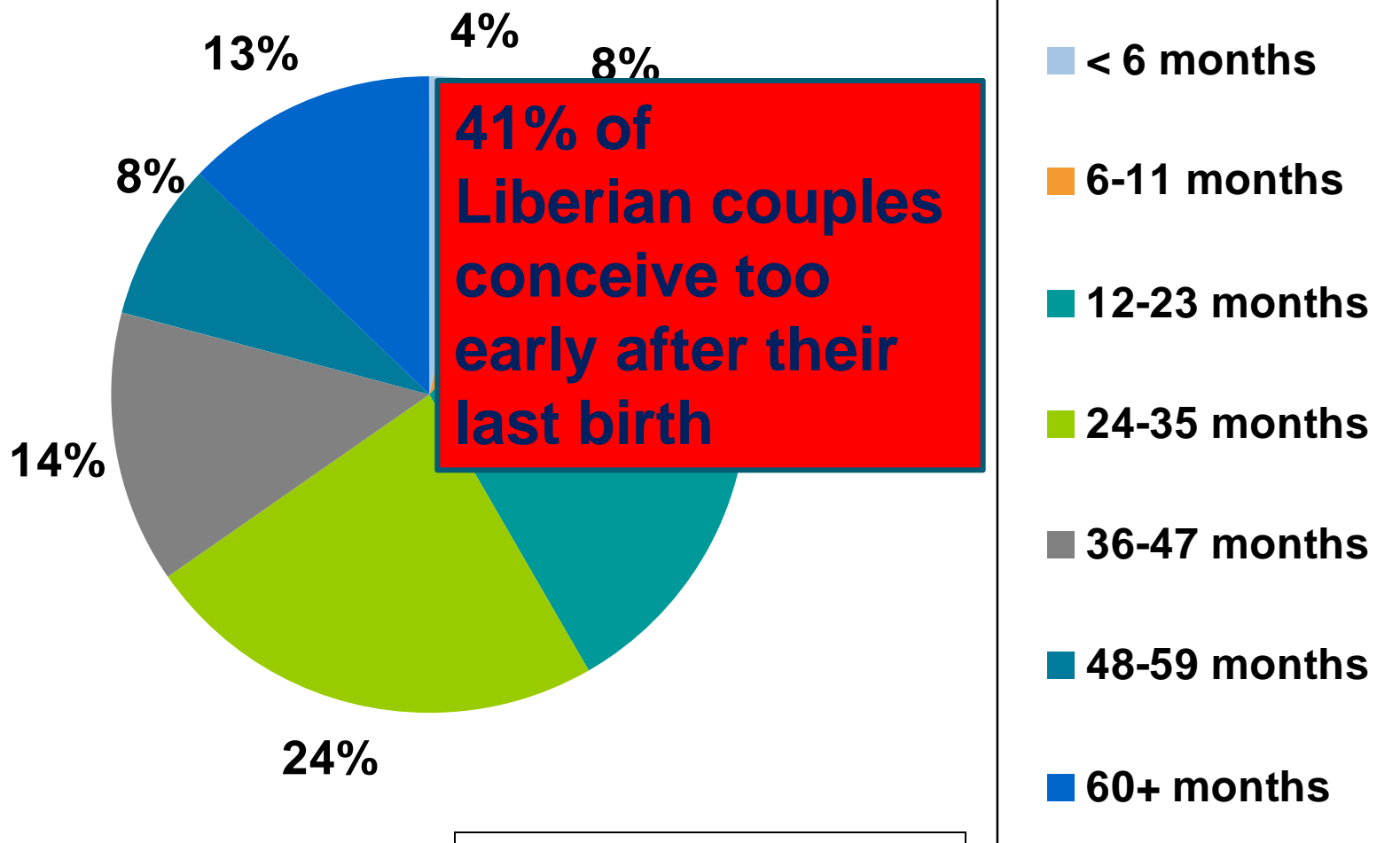
N of Non-First Births=4,531

Factors Influencing Return to Fertility Across Postpartum Periods among Kenyan Women



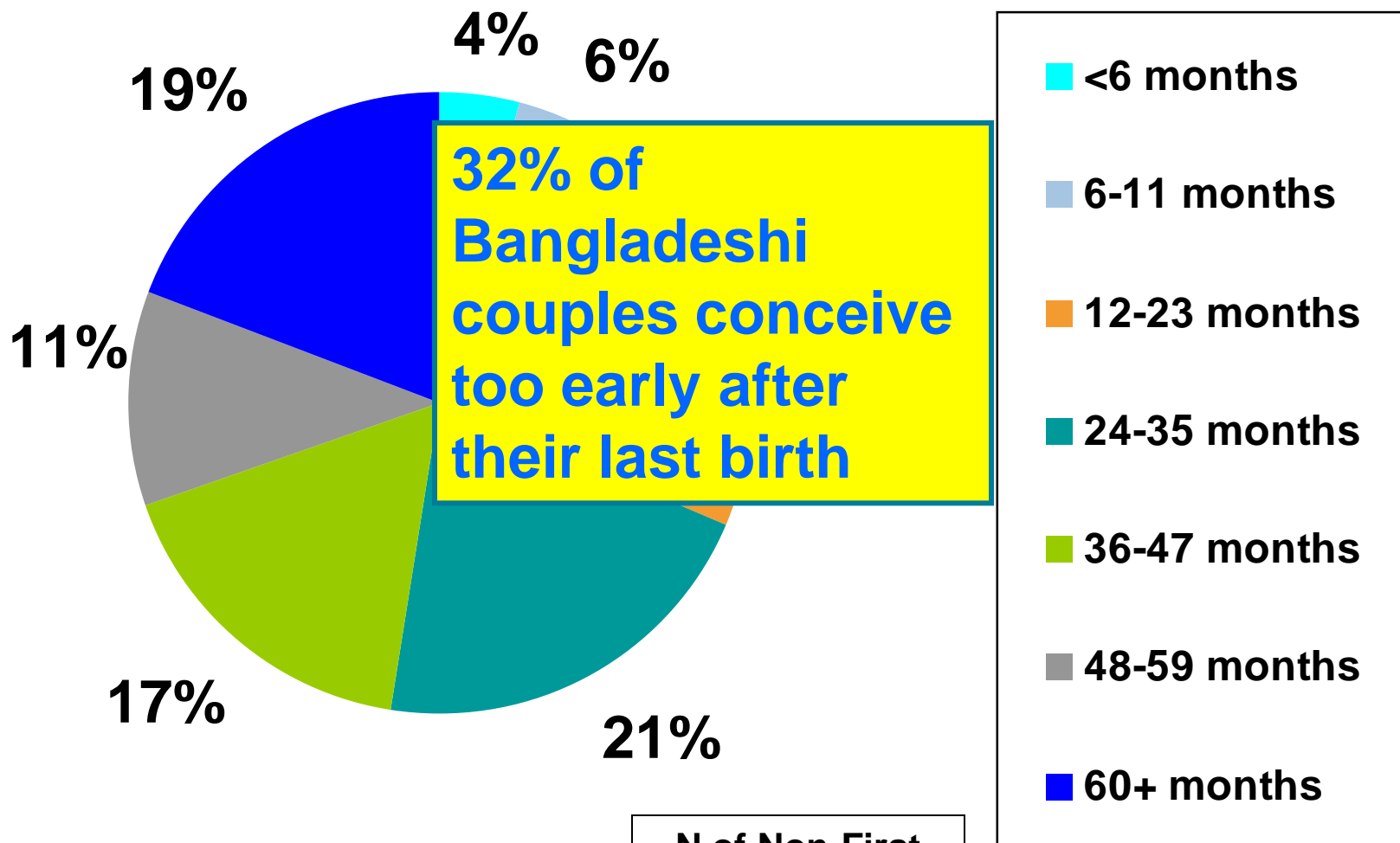
Postpartum Women: N=2,264
 Sexually Active: N=1,724
 Return to Menses: N= 1,286
 Exclusive Breastfeeding: N= 180
 Predominant Breastfeeding: N=277

Birth-to-Conception Spacing Among All Ever-Married Women Aged 15-49, All Non-first Births in the Last 5 Years Liberia



N of non-first births=4,318

Birth-to-Conception Spacing Among All Ever-Married Women Aged 15-49, All Non-first Births in the Last 5 Years Bangladesh



N of Non-First Births=3,994



Benefits of Exclusive Breastfeeding (EBF) for infants

- EBF saves lives by providing all essential nutrients for infants < 6 months
- Potential to prevent 13% of all U5 deaths
- Ranks as the most important preventative approach to saving children's lives
- Protects infants against GI infections and pneumonia
- Increased cognitive development
- Literature supports EBF

Bhandari et al.
2008.

EBF Versus Complimentary Feeding in Kenya

Age in Months	% EBF	% Supplemental/ Complimentary Feeding
0-1	51.8	10.2
2-3	34.8	31.5
4-5	13.2	59.9
6-8	3.6	83.9

*Source: KDHS 2008-2009



NCD Benefits for Women who breastfeed

- If women are EBF and amenorrhic: greater than 99% effective FP method
- Reduces risk of:
 - Hypertension
 - Type 2 diabetes
 - Certain types of cancer
- Affordable

WHO 2007

What is Postpartum Family Planning?

- Through the first year postpartum
 - Return to fertility=pregnancy risk
 - Return to sexual activity
 - Breastfeeding
 - LAM and transition
 - Method considerations: timing and breastfeeding status
 - Healthy spacing of the next pregnancy
 - Integration—tailoring to fit with timing and service

Unique relationship

- Lactational amenorrhea ↔ Exclusive breastfeeding
- Fertility return ↔ Complementary feeding
- Maternal nutrition
▪ Spacing ↔ Infant health & nutrition
- Maternal survival ↔ Infant survival



WHO Recommendations: HIV and Infant Feeding 2010

- Integrating HIV interventions into MCH/FP services
- **HIV uninfected or whose HIV status is unknown:**
 - EBF for the first 6 months
 - Introduce complimentary foods while continuing to BF for 24 months
- **HIV infected and know infants are HIV uninfected or status unknown**
 - EBF for the first 6 months
 - Introduce complementary foods thereafter.

WHO 2010

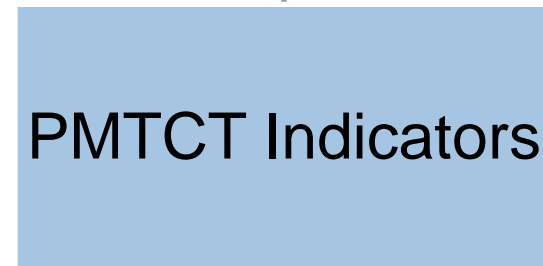
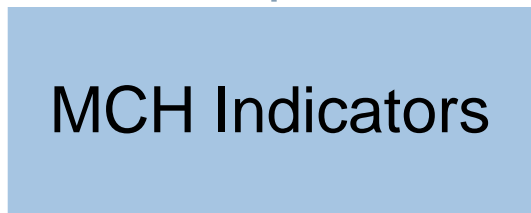
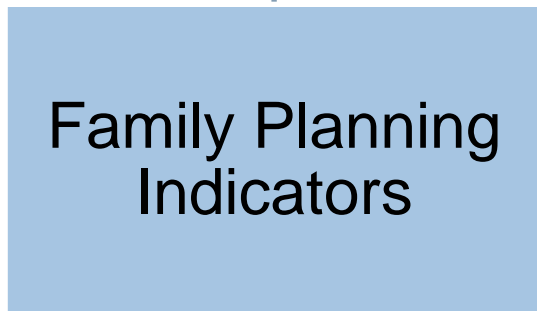
Benefits of linking MIYCN and FP in Kenya*

*KDHS 2008-2009

*Family Planning Needs during the Extended Postpartum Period in Kenya. Access-FP. June 2006

* Kenya HIV SPA 2004

Can potentially improve a number of indicators simultaneously!





Thank you!

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