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

Holly Blanchard RH/FP Senior Advisor MCHIP
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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
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

265,144 children

Adj. Relative Risk

Interval in months

Stunted
Underweight
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.
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 $\geq 36$ 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
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
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

49% of couples in Kenya conceive too early after their last birth

N of Non-First Births=4,531
Factors Influencing Return to Fertility Across Postpartum Periods among Kenyan Women

- Sexually active: N=1,724
- Return to menses: N=1,286
- Exclusive Breastfeeding: N=180
- Predominant Breastfeeding: N=277

RISK OF UNPLANNED PREGNANCY 6+ 12 MONTHS
Birth-to-Conception Spacing Among All Ever-Married Women Aged 15-49, All Non-first Births in the Last 5 Years Liberia

41% of Liberian couples conceive too early after their last birth

N of non-first births=4,318

- < 6 months: 8%
- 6-11 months: 13%
- 12-23 months: 14%
- 24-35 months: 24%
- 36-47 months: 8%
- 48-59 months: 4%
- 60+ months: 4%
Birth-to-Conception Spacing Among All Ever-Married Women Aged 15-49, All Non-first Births in the Last 5 Years Bangladesh

32% of Bangladeshi couples conceive too early after their last birth

- <6 months: 4%
- 6-11 months: 6%
- 12-23 months: 11%
- 24-35 months: 17%
- 36-47 months: 19%
- 48-59 months: 21%
- 60+ months: 19%

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

<table>
<thead>
<tr>
<th>Age in Months</th>
<th>% EBF</th>
<th>% Supplemental/Complimentary Feeding</th>
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</thead>
<tbody>
<tr>
<td>0-1</td>
<td>51.8</td>
<td>10.2</td>
</tr>
<tr>
<td>2-3</td>
<td>34.8</td>
<td>31.5</td>
</tr>
<tr>
<td>4-5</td>
<td>13.2</td>
<td>59.9</td>
</tr>
<tr>
<td>6-8</td>
<td>3.6</td>
<td>83.9</td>
</tr>
</tbody>
</table>

*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
- Fertility return
- Maternal nutrition
  - Spacing
- Maternal survival
- Exclusive breastfeeding
- Complementary feeding
- Infant health & nutrition
- 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
* Kenya HIV SPA 2004

Can potentially improve a number of indicators simultaneously!

MIYCN/FP Integrated Programs

- Family Planning Indicators
- MCH Indicators
- PMTCT Indicators
Thank you!

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