OBJECTIVES AND METHODS OF THE TECHNICAL CONSULTATION

In an effort to better understand the potential synergies existing between maternal, infant and young child nutrition (MIYCN) and family planning (FP) (e.g., exclusive breastfeeding and lactational amenorrhea method [LAM]), MCHIP organized a technical consultation to capitalize on opportunities for integration. The overall purpose of this meeting was to explore benefits as well as challenges of integrating family planning and nutrition services. While infant and young child feeding is a key linkage, other opportunities for integration within immunization, maternal health and HIV/AIDS prevention exist.

Specific meeting objectives were to:
1. Examine evidence of maternal, infant and young child nutrition and family planning as it relates to maternal, infant and child survival;
2. Recognize existing synergies and provide a few examples of programmatic practices of MIYCN/FP integration; and
3. Reach consensus on recommendations and next steps to further these efforts toward integration of these two fields of public health.

More than 55 participants from 31 global health organizations were brought together to participate in the all-day event. Public health experts from the World Health Organization (WHO), UNICEF, U. S. Agency for International Development (USAID) bilateral organizations, World Bank, the Bill and Melinda Gates Foundation and universities presented both research evidence and programmatic findings on pregnancy spacing and the benefits to infant, child and maternal health. Experts agree on the benefits of exclusive breastfeeding, the effectiveness of LAM, and the need for the transition to optimal complementary feeding and the use of modern family planning methods at 6 months. Following these presentations, discussions explored possible ways to integrate MIYCN and FP messages and services. Participants further examined other possible connections, linkages and/or integration of services for women and children under two through small group work. The large group was divided into five smaller working groups by specific health services—prevention of mother-to-child transmission of HIV (PMTCT), immunization, infant and young child nutrition, FP, and maternal child health. The working groups were asked to discuss the strengths, weaknesses, opportunities and barriers to integrating MIYCN and FP during several points of time throughout the MIYCN life cycle (antenatal, at delivery, 0–6 months, 6–9 months and 9–24 months). The small groups reconvened into plenary for report-outs, followed by a lively, open floor discussion.
PURPOSE OF THIS DOCUMENT

This document shares highlights from the technical consultation, focusing on themes that emerged throughout the day. It is our hope that these initial findings and identified areas of synergy will serve as the basis for the way forward for integration of MIYCN and FP into programs and services.

HIGHLIGHTS OF THE PRESENTATIONS

Setting the Stage: World Health Organization

Dr. Rosa Constanza de Villar opened the technical meeting, stating that the evidence on integration is limited. In 2007, a Cochrane systematic review of integration concluded:

- Few studies of good quality, large and with rigorous study design, have been carried out to investigate strategies to promote service integration in low- and middle-income countries. Previous studies describe the service supply side; however, no study to date examines or measures aspects of the demand side.
- Future studies must also assess the client’s view as this will influence uptake of integration strategies and their effectiveness on community health.

Why do we care about integrating maternal, infant and young child nutrition and family planning in our programs?

How does birth to pregnancy spacing affect infants and children?

Shea Rutstein presented his analysis of 52 Demographic and Health Surveys (DHS) conducted between 2000 and 2005, which included 1,123,454 births. The purpose of this analysis was to study the effects of birth spacing on infant and child mortality and on nutritional status, controlling for the effects of potentially confounding variables. This analysis outlined the benefit of birth to pregnancy spacing of 36 months, which produces the healthiest outcome for infants and children.

- Compared with a 36–47 month birth to conception interval, the following birth to conception intervals increase the risk of neonatal mortality by:
  
<table>
<thead>
<tr>
<th>Duration</th>
<th>Risk Percentage</th>
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<tbody>
<tr>
<td>Less than 12 months</td>
<td>190 %</td>
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<tr>
<td>12–23 months</td>
<td>128 %</td>
</tr>
<tr>
<td>24–35 months</td>
<td>104 %</td>
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<tr>
<td>36–47 months</td>
<td>100 %</td>
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<tr>
<td>48–59 months</td>
<td>125 %</td>
</tr>
<tr>
<td>60+ months</td>
<td>138 %</td>
</tr>
<tr>
<td>First births</td>
<td>222 %</td>
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- Lowest neonatal mortality at 24- to 47-month birth to conception intervals.
- Duration of the preceding birth to conception interval is strongly associated with neonatal, infant and under-five mortality, after controlling for confounding factors.
- Too rapid childbearing poses substantial mortality and nutritional risks for children.
- Delaying conception three years or longer after a birth substantially decreases the risks, compared to delays of just two years and less than two years.
- The shortest duration of preceding birth to conception interval is associated with small or very small birth size, which is a proxy in DHS for low birth weight, even after controlling for a host of potentially confounding factors.
• First births and the short duration of the preceding birth to conception interval are associated with chronic malnutrition (stunting) measured by low height-for-age and underweight, as measured by low weight-for-age, even after controlling for a host of potential confounding factors.

• The longer the interval, the better the nutritional status for both the mother and child.

• Compared with a 36–47 month birth to conception interval, first births and the following birth to conception intervals increase the risk of stunting by:
  - First births: 111%
  - Less than 12 months: 146%
  - 12–23 months: 130%
  - 24–35 months: 114%
  - 36–47 months: 100%
  - 48–59 months: 97%
  - 60+ months: 83%

• Enabling women to realize their birth interval preferences would assist them in avoiding short birth intervals in most countries and, at the same time, reducing stunting in their children. In other countries, mothers may need to be educated about the risks of having short birth intervals, including malnutrition in their children.

Inter-pregnancy interval and maternal depletion—does birth spacing affect maternal and infant nutritional status?

Rolf Klemm presented research on maternal depletion and its impact on maternal weight gain and birth outcomes. During pregnancy and lactation, women have an increased need for energy, protein and vitamin A, particularly during lactation, as well as other micronutrients (e.g., zinc, folic acid and vitamin E). Women’s iron needs are significantly increased during pregnancy to
meet the needs of the growing fetus and other physiological requirements. Amenorrhea during lactation reduces the need for iron.

- Mothers who are severely malnourished may experience weight gain between pregnancies, but the weight of their second child tends to be lower than the first.
- During pregnancy, marginally malnourished mothers tend to lose weight during pregnancy but give birth to infants that weigh more than their severely malnourished counterparts.
- Well-nourished mothers do not experience a fluctuation in their own weight during pregnancy or in the weight of their infant.

The inter-pregnancy interval is subdivided into the period of lactation and the period when the mother is neither pregnant nor lactating. These two periods may have different effects on the next pregnancy. There is a complex web of factors that come into play, such as social and economic status, level of education, prenatal care, parity and maternal morbidity, which can affect each of the factors and confound the relationship between inter-pregnancy interval and maternal nutritional status. For women with adequate nutrient intake, a longer recuperative period is unlikely to make a difference, whereas for malnourished women or those with high levels of physical activity, this recuperative period could be essential.

In the case of maternal iron status, if a woman receives iron supplements during her prenatal care, she is less likely to be anemic. Thus, it is necessary to control for these factors when examining the relationship between inter-pregnancy interval and aspects of maternal nutritional status.

Among rural pregnant adolescents from Bangladesh, annual changes in anthropometric indicators such as weight, body mass index (BMI) and mid upper arm circumference (MUAC) decreased, while these indicators increased for same age never-pregnant adolescents (Rah, Christian et al. 2008). A large proportion of adolescents in developing countries enter pregnancy with poor nutritional status and are likely to have suboptimal dietary intake during pregnancy and lactation, subjecting them to a risk of nutritional depletion and impaired growth of both the mother and the fetus due to the competition for nutrients between the growing mother and the fetus.

The implication is that the depletion of maternal fat stores during pregnancy and early stages of lactation was more profound among adolescents who became pregnant at an earlier gynecological age.

Rae Galloway presented the linkages between child survival, family planning and nutritional outcomes for both mother and child. She highlighted the reanalysis of DHS surveys from 1990–2005 completed by Stover and Ross (2009), and found that an increase in contraception use is responsible for avoiding 1.2 million maternal deaths during the same period. They also note that higher parity and giving birth at an older age resulted in higher maternal mortality.
Ms. Galloway also presented the Trussell and Pebley (1984) schematic overview of the effects of birth spacing on maternal, infant and child mortality, shown below.

![Trussell & Pebley, 1984 schematic overview](image)

Pinpointing the causal relationships of independent variables that may be responsible for malnutrition in infants and children is difficult to determine, but Ms. Galloway posed the question of “Does it really matter?” Our ultimate goal is to offer a package of interventions that:

- Maximizes maternal and child survival.
- Improves nutritional status.
- Improves the status of women by keeping girls in school, which will:
  - Prevent teenage pregnancies, and
  - Reduce their workload by decreasing the number of children they have.

**Can we do this by integrating family planning and child survival with nutrition interventions?**

**Is postpartum family planning a time and place to integrate these services?**

Catharine McKaig highlighted opportunities for integration when fertility returns, newborns are no longer exclusively breastfed and child survival becomes challenging. She discussed an analysis of DHS surveys from 17 countries, which revealed that 50–84% of postpartum women want to avoid another pregnancy for at least two years (Winfrey and Borda 2010). However, women were not using a method of family planning due to a variety of factors including provider bias, women’s perceptions that they are not at risk for pregnancy when breastfeeding, cultural taboos around sexual intercourse and breastfeeding, and concern that use of a hormonal FP method during breastfeeding would be detrimental to the health of their baby. Providers assume that women are not sexually active, and both providers and women are unclear about the difference between LAM and breastfeeding. The characteristics of the first year postpartum have created confusion among providers and clients alike.

Postpartum family planning should ideally include counseling on:

- Return to fertility
- Return to sexual activity
- Breastfeeding
- Postpartum family planning options
• Criteria for using Importance and timing of transitioning to another method
• Method considerations: timing and breastfeeding status
• The transition from exclusive breastfeeding to complementary feeding and breastfeeding starting at 6 months
• Healthy spacing of the next pregnancy

Has this type of integration already happened in the field?
Agnes Guyon shared a programmatic example of successful nutrition and family planning integration with a John Snow, Inc./Linkages program in Madagascar. The following were key findings:
• Integration of reproductive health, child health and nutrition in two provinces in Madagascar showed increases in contraceptive prevalence, exclusive breastfeeding and LAM use.
• Breastfeeding provides the programmatic entry point and serves as common ground for child survival, family planning and nutrition programs.
• Community-based counseling on infant and young child feeding is a successful strategy to improve the nutritional status of infant and young children within the catchment area.
• Promotion of community-based breastfeeding should be based on a comprehensive strategy that includes interventions to address policies, health services, community members, integration of both nutrition and family planning services, communication/behavior change communication, and monitoring and evaluation.

UNICEF currently developing generic integrated counseling package
Nune Mangasaryan and Christiane Rudert presented the draft UNICEF Infant and Young Child Feeding (IYCF) Counseling Package, which is currently being developed and field-tested to fill a gap in generic materials for community-based IYCF counseling. This counseling package complements the basic promotion packages for nutrition and child health that have an IYCF component.

The package consists of a comprehensive set of training materials, including a facilitator’s guide, participant materials and graphic training aids for interactive/participatory sessions; 26 integrated counseling cards; and three take-home brochures. The package is intended for community health workers with basic literacy skills and can also be used to train nurses and other primary health care staff. It is modeled on the UNICEF-WHO “Integrated IYCF Counseling Course” for health workers, and covers topics such as breastfeeding, complementary feeding, maternal nutrition, child spacing, HIV and infant feeding, IYCF in the context of severe acute malnutrition and IYCF in emergency settings. (Please see the addenda on the complete draft package and draft counseling cards.)

DISCUSSION HIGHLIGHTS AND KEY RECOMMENDATIONS
The following matrix highlights the outcomes of the small group work divided by the health service—PMTCT, maternal and child health (MCH), FP, IYCN and immunizations—that was addressed by each group. The findings and recommendations are presented in terms of the roles of two categories of health workers—facility health worker and community health worker (CHW).
### Activity Matrix with Possible Synergies Among Health Interventions for Mothers, Infants and Children <5 Years

<table>
<thead>
<tr>
<th>Activity</th>
<th>Findings</th>
<th>Recommendations</th>
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</table>
| **EPI** |  - Tetanus toxoid  
  - Polio pentavalent from birth to 14 weeks  
  - Measles at 9 months  
  - Check to see fully immunized at or around 1 year |  - EPI education to mothers during FANC  
  - Referral to FP during polio/pentavalent  
  - Promote EBF/LAM  
  - IEC on HTSP (posters, health talks) |
| **CHW** |  - Promote routine EPI |  - IEC on HTSP |
| **FP** |  - Counseling on HTSP  
  - PPFP  
  - PPLAPM  
  - Immediate and exclusive breastfeeding  
  - LAM and transition |  - Continue support on PPFP; include healthy spacing, birth to pregnancy 30–36 months  
  - BF/complementary feeding and transition to other FP  
  - PSI’s “Mali model”: dedicated skilled FP worker to provide long-acting methods to interested mothers during routine EPI activities; consider other staff or nearby trained District Health Representatives |
| **CHW** |  - Promote HTSP EBF, LAM, CBD |  - CHWs to provide short-acting methods during EPI activity at clinic |
| **PMTCT** |  - PITC and ARVs (or ART) initiated in ANC  
  - Prophylactic ARVs during L&D  
  - Recommend EBF  
  - Continuation of ARVs  
  - Dried Blood Spot (DBS) testing for infants exposed to HIV  
  - Continue care and treatment for those who need it or prophylactic ARVs |  - Strengthen postnatal services to include PPFP at time of DBS test  
  - Discuss LAM when promoting EBF  
  - Second prong of PMTCT |
| **CHW** |  - Support groups for PLHA |  - Promote EBF for all women regardless of HIV status; promote safer sex, HIV testing and concept that HIV is a chronic disease; with care and treatment people can continue to have meaningful lives |
| **IYCN** |  - Iron and other micronutrients and balanced nutrition during ANC  
  - EBF  
  - BF and complementary feeding  
  - At 12 months, infant should be eating all foods that family is eating |  - Promote LAM when discussing EBF and transition to other methods when discussing introduction of complementary foods  
  - Healthy spacing of birth to pregnancy of 30–36 months reduces percentage of under-5 stunting  
  - It is probable that delaying first birth to women 18 years or older will also reduce growth deficit among 6-month-old infants |
| **CHW** |  - Promote healthy maternal nutrition, distribution of iron and vitamins, appropriate complementary foods, clean water |  - Promote EBF, especially to community leaders and mothers-in-law  
  - Continue breastfeeding even when mother or baby is sick; EBF for infants <6 months, ORS for infants >6months + BF  
  - Promote health benefits to children under 5 when parents space out birth to pregnancy intervals of 30–36 months |
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<tr>
<th>ACTIVITY</th>
<th>FINDINGS</th>
<th>RECOMMENDATIONS</th>
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| **MCH** | Focused ANC (good maternal nutrition), birth preparedness, advise ITN, SBA, immediate and EBF; discuss HTSP and FP use  
SBA at birth  
Immediate postpartum care, KMC, EBF, ITN  
Postpartum check (x3 in first 6 weeks) | Strengthen postnatal services, FP in PAC, transition from EBF to complementary foods; should also trigger in providers the need to transition to other method of FP  
Strengthen pre-service education on PPFP and transition from EBF/LAM to complementary foods/other FP  
Include LAM in KMC |
| **CHW** | Promote FANC, SBA | ENC and 2–3 postnatal visits during first week, LAM “Ambassadors” (ACCESS-FP Bangladesh); CBD of FP inclusive of progestin-only methods |

**Key to Abbreviations**: ARV=antiretroviral; BF=breastfeeding; CBD=community-based distribution; EBF=exclusive breastfeeding; ENC=essential newborn care; EPI=expanded program on immunization; FANC=focused antenatal care; HTSP=healthy timing and spacing of pregnancy; ITN=insecticide-treated bed net; KMC=kangaroo mother care; ORS=oral rehydration solution; PAC=postabortion care; PITC=provider-initiated testing and counseling; PLHA=people living with HIV/AIDS; PPLAPM=postpartum long-acting and permanent methods; SBA=skilled birth attendant
CALL TO ACTION

The MIYCN-FP Integration Technical Meeting was considered part of a process to start the discussion around this important health issue and identify a group of individuals and institutions that are key to moving this initiative forward. Donor organizations that attended this meeting were in support of this type of integration. In conclusion, it is important that we remember the key information that was shared at this meeting:

- We need more rigorous studies to examine the demand side of integrated services.
- Lowest neonatal mortality rates occur at 24- to 47-month birth to conception intervals. Too rapid childbearing poses substantial mortality and nutritional risks for both mothers and children.
- Our ultimate goal is to offer a package of interventions that: maximize maternal and child survival, improve nutritional status and improve the status of women by keeping girls in school, which will prevent teenage pregnancies and reduce their workload by decreasing the number of children they have.
- Between 50% and 84% of postpartum women want to avoid another pregnancy but are not using a method due to provider bias, women’s perceptions that they are not at risk for pregnancy when breastfeeding, cultural taboos around sexual intercourse and breastfeeding, and concern that use of a hormonal FP method during breastfeeding would be detrimental to the health of the baby. Postpartum FP counseling must address these issues along with others mentioned in the report.

Next steps include:

- Become a member of the Implementing Best Practices (IBP) Initiative and join the Maternal, Infant, and Young Child Nutrition and Family Planning Community of Practice found on this Web site. The IBP Web site was developed by WHO and USAID to provide a forum through which key stakeholders within the global reproductive health community can share evidence-based practices for use in low-resource settings. To learn more, visit: http://my.ibpinitiative.org/iycnf.

- As a member of the MIYCN/FP Community of Practice, you will receive notifications about events and activities related to MIYCN/FP and participate in virtual discussions and presentations. You can also share any information or tools related to MIYCN/FP by posting or linking to them on the Community of Practice.

- Join the MIYCN/FP working group, which will meet quarterly to move forward the agenda on integration of MIYCN and FP. As a working group, we will define our goals and objectives as well as the type of deliverables needed. These deliverables include indicators to measure integration and evaluate our efforts in terms of impact, advocacy tools to increase donor support, and other strategies to strengthen health systems that allow community-based and facility-based workers to be trained in nutrition and family planning.

Feedback received from meeting participants confirmed the importance of this type of integration. A need to focus on how to bring these two health services together in programs in the field was identified as imperative. We look forward to working together to move this initiative forward.
Addendum 1: Community IYCF Counseling Package (DRAFT)

Community IYCF Counseling Package

3 Take Home Brochures
Addendum 2: Counseling Cards from UNICEF Community IYCF Counseling Package (DRAFT)