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## Concept Note 3

Studying the integration of maternal, infant, and young child nutrition (MIYCN) with agriculture, water, sanitation, and hygiene (WASH), or HIV programs

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## **Studying the integration of maternal, infant, and young child nutrition (MIYCN) with agriculture, water, sanitation, and hygiene (WASH), or HIV programs**

### **Background**

Large-scale programs to promote maternal, infant, and young child nutrition (MIYCN) are urgently needed to address the global burden of undernutrition found in developing countries (Lutter et al. 2011, e1418). Growing evidence supports specific interventions including the promotion of breastfeeding, complementary feeding, or handwashing strategies for the improvement of nutrition and nutrition-related outcomes (Bhutta et al. 2008, 417) but multi-sector approaches that offer the greatest potential for optimal impact have not been evaluated in the context of rigorous evaluations of program effectiveness (Pronyk et al. 2012, 9).

Evidence gaps remain around *how* to effectively integrate MIYCN programming with other sectors including agriculture, water, sanitation, and hygiene (WASH), or HIV programs and information is also incomplete about *which* integrated interventions would be best. Household food production strategies, for example, are an agricultural intervention that appears to significantly improve diet patterns and vitamin A intakes for both women and children but robust studies to measure and document changes in nutrition indicators have not been conducted (Girard et al. 2012, 205). A review of strategies for integrating health care services suggested that “adding on” services or creating linkages across sectors may enhance the utilization and outputs of healthcare delivery but the impact on maternal and/or child health status remains unclear (Dudley and Garner 2011, 2).

This study seeks to rigorously examine whether community-based integration of MIYCN with agriculture, WASH, or HIV programs is feasible, effective, and synergistic to promote the adoption of key MIYCN practices. A better understanding about the benefits or limitations of an integrated approach would be critical to thoughtfully inform the design of large-scale multi-sector programs in resource-constrained settings where staff, funding, and public infrastructure remain very limited.

### **Research Objectives**

1. Based upon a program theory framework, we will examine the performance of an intervention that delivers MIYCN integrated with agriculture, WASH, or HIV programs\*. Analysis will focus on aspects of provision, utilization, coverage, and impact in a given population to determine if anticipated change(s) in nutrition or nutrition indicators occurred. (\* Detailed methods are described for agriculture and HIV.)
2. With the selection of either an appropriate control group (e.g. MIYCN only, WASH only, or agriculture only) or the inclusion of randomization to reduce bias, delivery of the integrated MIYCN program will be compared to program(s) offering only single sector interventions to assess the plausibility or probability of program effect.

### **Methods**

#### ***Option One: (MIYCN + Agriculture)***

In SPRING countries where agricultural development programs with nutrition goals and interventions are being planned, a community based intervention will be selected that is appropriate for the integration of MIYCN. For example, agriculturally-based strategies aimed at increasing the quantity or quality of food produced at the household level may include

community garden, kitchen garden, micro-livestock, fish farming, or dairy interventions or approaches may alternatively target farming of cash crops or promotion of post-harvest practices to improve nutrient content or bioavailability of micronutrients. Primary data collection will focus on understanding the content, delivery, and acceptability of the integrated MIYCN+agriculture services and qualitative and quantitative methodology will be applied as appropriate. Process indicators as well as impact indicators will be routinely measured in order to analyze population changes and to monitor program implementation.

***Option Two: (MIYCN + HIV services)***

In countries where SPRING program activities are closely linked to HIV services or interventions, an appropriate community or facility-based intervention will be selected for the comprehensive and targeted integration of MIYCN. Potential programs enrolling women, children, or family caregivers as participants may represent local resources that provide nutrition, assessment, counseling and support (NACS) for people living with HIV (PLHIV) or prevention of mother to child transmission (PMTCT) services. Data collected will examine the adequacy of MIYCN + HIV integrated services and comparisons will be made between integrated “intervention” centers and “control” locations that continue to provide only standard or existing HIV services. Studying and measuring the magnitude of observed changes in impact indicators will be useful to inform program planners and policy-makers about the potential differences or advantages for improving maternal and child health associated with the provision of integrated MIYCN+HIV services.

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