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FP-MNCH-NUTRITION INTEGRATION TECHNICAL CONSULTATION

March 30, 2011

CONFERENCE REPORT

FP-MNCH-Nutrition Integration Technical Consultation

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Conference Report

CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

ANC	Antenatal Care
BMI	Body-Mass Index
CHW	Community Health Worker
cPAC	Comprehensive Postabortion Care
CPR	Contraceptive Prevalence Rate
CYP	Couple Years of Protection
DDS	Demographic Surveillance System
EmONC	Emergency Obstetric and Neonatal Care
EBF	Exclusive Breast Feeding
EPI	Expanded program of Immunizations
ESD	Extending Service Delivery Project
FP	Family Planning
GHI	Global Health Initiative
HFS	Health and Family Services
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HTSP	Healthy Timing and Spacing of Pregnancy
KAP	Knowledge, Attitude and Practice
LAM	Lactational Amenorrhea Method
MCH	Maternal and Child Health
MNCH	Maternal, Neonatal, and Child Health
MOH	Ministry of Health
MUAC	Mid-Upper Arm Circumference
PAC	Postabortion Care
PNC	Postnatal Care
PPC	Postpartum Care
PPFP	Postpartum Family Planning
PPIUD	Postpartum Intrauterine Device
PSI	Population Services International
RH	Reproductive Health
RTI	Response to Intervention
USAID	United States Agency for International Development
WHO	World Health Organization

INTRODUCTION

USAID convened a technical consultation conference in March 2011 for experts in the fields of Family Planning (FP), Maternal, Neonatal, Child Health (MNCH), and Nutrition to present evidence and discuss strategies on integration, following on a successful series of meetings on FP integration into HIV/AIDS services. The importance of integrating FP, MNCH and Nutrition as a strategy for reducing maternal and child mortality was first recognized internationally at the 1994 Conference on Population and Development in Cairo. The 2015 Millennium Development Goals further established the critical need to integrate these services to realize substantial improvements in maternal health. A recent report by both the United Nations Population Fund and the Guttmacher Institute estimated that linking FP-MNCH-Nutrition services would cost approximately $1.5 billion less than providing MNCH-Nutrition services alone. [1] Additionally, the Global Health Initiative (GHI) has emphasized that integration of health services has the potential to improve health outcomes, promote collaboration across health and development programs, and encourage sustainability.

USAID recognizes there has been limited research and evidence to guide policy action and program efforts on FP-MNCH-Nutrition integration. The FP-MNCH-Nutrition Integration Technical Consultation represents the first step to address this knowledge gap. The one-day conference was organized by the Extending Service Delivery Project, a USAID project designed to address the need for RH/FP services for underserved populations around the world. Meeting participants were invited to assess the evidence presented by fellow researchers, program planners, and practitioners with technical expertise, as well as the Cochrane HIV/AIDS group from the University of California, San Francisco, which conducted a systematic review of all FP-MNCH-Nutrition integration studies since 1999. By collectively identifying the processes and tools that lead to integration "best practices," [2] analyzing gaps in the evidence, and making recommendations for research and follow-on activities, the assembled group was able to take first steps toward defining the future strategy for FP-MNCH-Nutrition integration.

PURPOSE & OBJECTIVES

The key purposes of the FP-MNCH-Nutrition Integration Technical Consultation were to:

- Assess the existing evidence on the application of integrated FP-MNCH-Nutrition models, processes, and tools that include best practices that support an effective integrated approach;
- Identify evidence gaps;
- Prepare a report on the findings of the meeting and the extent to which the evidence for integration enhances service coverage, quality, effectiveness, equity, use, and health outcomes;
- Initiate next steps toward the development of a learning agenda, including recommendations for research, documentation, and follow-on actions.

The following list describes the core objectives of the integration consultation:

[1] Susheela Singh et al, *Adding It Up: The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health,* The Guttmacher Institute and UNPFA, 2009.

[2] "Best practices," as used in this context and report, conveys a broad interpretation of the term covering a wider set of practices that may not necessarily meet the stringent standards of high impact practices.

- Identify evidence-based, integrated FP-MNCH-Nutrition models and approaches that have achieved effective and equitable services for women and children. The models under consideration are: FP-ANC/Immediate and Facility/Community-Based Postpartum Care; Post Abortion Family Planning; FP-Immunization/Well Baby; and FP-Nutrition;
- Summarize the strength of evidence for each of the four integration models;
- Identify knowledge gaps and topics that require additional research to achieve improvement in health outcomes through integrated FP-MNCH-Nutrition services;
- Identify conditions under which integration makes sense;
- Identify group recommendations and next steps for strengthening effective, integrated FP-MNCH-Nutrition services.

PLENARY PRESENTATIONS

FP-MNCH-Nutrition Integration Overview
Dr. Susan Brems, Bureau for Global Health, USAID

This plenary session set the stage for the conference's activities, highlighting the hypotheses behind integration, its current challenges at the political and field level, and the key tasks participants must undertake for FP-MNCH-Nutrition integration to ultimately reach its full potential. Two working hypotheses have driven FP-MNCH-Nutrition integration forward in recent years: 1) In most circumstances, integrated services provide for clients more effectively and equitably than vertical services; and 2) Clients desire integrated services to address their healthcare needs. USAID's Global Health Initiative (GHI) has operated under these two assumptions, but more evidence on cost savings, efficacy, and best practices is needed, especially as many programs begin scaling up. Country context is also crucial, as integrations successful in one region may not prove successful in others. In addition, a woman-centered approach is critical since community women manage programs, monitor quality of care, and often determine the overall success of projects. Conferences attendees were given four major tasks to push integration forward:

1. Organize FP-MNCH-Nutrition Integration Knowledge. (This technical consultation represents the first step.)
2. Review evidence to determine outcomes and circumstances where integration makes sense
3. Develop a learning agenda that GHI can incorporate
4. Identify best practices that lead to better health outcomes

Systematic Review of Integration of Maternal, Neonatal, and Child Health and Nutrition and Family Planning
Dr. Deborah Bain-Brickley, University of California, San Francisco

The Cochrane HIV/AIDS Group at University of California, San Francisco has two main project goals: 1) Compile all published work on programmatic, structural, and policy integration between FP-MNCH-Nutrition to summarize/assess the quality of rigorous evaluation studies and identify how to effectively implement integrated programs, and 2) Identify evidence gaps in the FP-MNCH-Nutrition integration evidence base. Integration, as defined by the Cochran Group, is the "variety of managerial operational changes to health systems to bring together inputs, delivery, management, and organization of particular service functions … to improve the service in relation to efficiency and quality, thereby maximizing use of resources and opportunities"[3].

Using a variety of electronic databases and website searches, the Cochrane Group screened 14,000 journal citations for rigorous evaluation design and involvement of FP-MNCH-Nutrition integration; 29 interventions were selected for deeper analysis. The studies showed heterogeneity in terms of study objectives, intervention types, study designs, locations, and outcomes. The following list describes the breakdown of the interventions according to the four integration models under consideration (several studies fell under multiple categories):

- FP-ANC & Delivery/PPC = 14 interventions
- FP-PAC = 10 interventions

[3] Briggs CJ, Garner P. Strategies for integrating primary health services in middle- and low-income countries at the point of delivery. Cochrane Database of Systematic Reviews 2006, Issue 2. Art. No.: CD003318

- FP-Immunization = 16 interventions
- FP-Nutrition = 5 interventions

After reviewing study highlights under each model, the Cochrane Group shared its holistic assessment of the integrated programs' efficacy, best practices, barriers, and evidence/program gaps. Overall, most studies reported that FP-MNCH-Nutrition integration improved service coverage, quality, and use. Costs were also reduced in the few studies tracking financial metrics. Service effectiveness showed improvements in some indicators but mixed/no effect in others. The Cochrane Group emphasized the need for more rigorous studies to bolster these positive preliminary findings.

The project identified several best practices for FP-MNCH-Nutrition integration in the 29 interventions. Stakeholder support and interest – including country-level support – was integral. Training, continuing education, and supervision for providers were deemed important, as were client-centered education and counseling. High quality health facilities needed to be available and accessible to community members. Another best practice was a large selection of free contraceptives. Lastly, involving traditional health workers and receiving the endorsement of male community members helped win further acceptance of FP.

The main barriers to effective integration were logistical, financial, and social in nature. Logistical barriers included staff turnover, heavy workloads, lack of coordination between providers, brief intervention timelines, and challenges to patient flow. The high cost of provider training, uneven deployment of community health workers, and the cost of commodity procurement and supply represent some of the key financial and system hurdles. Social barriers included cultural resistance to contraception, inherited practices resistant to change, and health workers hesitant to adopt new practices.

The Cochran Group identified several research gaps in the existing integration evidence base. In addition to greater evaluation rigor (the average rigor score was 3.2 out of 9.0), they cited the need for more studies comparing integrated services to similar, non-integrated services, which would allow for direct efficacy and cost comparisons. Overall, more studies need to address the cost-effectiveness of integrated service coverage. There was a lack of FP-Nutrition integration studies compared to the other three models. Further studies targeting men or couples are also needed.

For the full Cochran Group systematic review please refer to Appendix 2.

The Impact of Integrated FP-MCH Services on Infant, Child, and Maternal Mortality in Matlab, Bangladesh
Dr. Julie DaVanzo, RAND Corporation
Dr. Mizanur Rahman, Independent Consultant

This session described the long-term health results at an FP-MCH integration site compared to a control site (standard government health services) in Matlab, Bangladesh. Since the 1960s, the Demographic Surveillance System (DDS) has collected rich data in Matlab, a rural sub-district in Bangladesh. From 1977 onwards, RH/FP, child survival, safe motherhood, facility delivery, and newborn care interventions have been introduced to Matlab's FP-MCH area. Pregnancy data from1978-2008 show that both maternal and neonatal mortality are 40-50% lower in the area with integrated FP-MCH services. The data also indicate the FP-MCH area had fewer pregnancies and fewer births that ended in stillbirth, miscarriage, or induced abortion. The research team concluded the lower maternal mortality rate and infant/child mortality rate was due to its lower pregnancy rate and better access to quality health

services. The Matlab research strongly suggested that integration of FP-MNCH services had a synergistic effect on reducing fertility, infant and child mortality, and maternal morbidity and mortality.

Meeting the Family Planning Needs of Postpartum Women
Dr. Ricardo Vernon, Investigación en Salud y Demografía (INSAD)

This session analyzed the integration of FP into PPC from several interventions from around the world, including Mexico, Guatemala, South Africa, Egypt, Haiti, and Thailand; the research drew from both published reports and operations research from USAID-funded Population Council programs. The key logic underlying integration is that most women desire a FP method during the PPC timeframe, but most programs fail to provide it. Consequently, the postpartum period represents a term of great unmet need. Integrating FP into PPC can be both effective and inexpensive while decreasing maternal and infant mortality. Research from interventions in Guatemala, Egypt, Gaza, and Togo showed that offering mothers a wide range of contraceptives – especially LAM and IUD – during the postpartum period proved effective at increasing FP uptake. The session reached four main conclusions based on the data: 1) Counseling on FP during ANC can help couples choose FP postpartum; 2) FP counseling with in-patient provision before discharge is effective, especially if a range of methods is offered; 3) Counseling and delivery during the 40-day visit can be effective if women can be encouraged to return, and 4) Systematic screening during the extended postpartum period, especially child immunization, can be effective.

WORKING GROUP PRESENTATIONS

Conference participants divided into working groups to analyze and discuss each of the four integration models:

1. FP-ANC/Immediate and Facility/Community-Based Postpartum Care
2. FP-Post Abortion Care
3. FP-Immunization/Well Baby
4. FP-Nutrition

Several speakers presented data in their technical areas. The working groups collaborated to answer the following five questions particular to each integration model:

- Do the integrated services have a positive or negative effect related to service coverage, cost, quality, use, effectiveness and impact?
- What are the best practices, tools and processes that lead to effective, integrated services?
- What are the barriers to effective integration?
- What are the gaps (evidence, research, programmatic)
- What are the next steps?

The following sections highlight the presentation findings and key themes for each integration model.

1. FP Integration into ANC, Immediate & Facility/Community PPC

Summary of Presentations

Examining MNCH/FP Integration: Assessment Findings from Afghanistan, Kenya, and Nigeria
Dr. Catharine McKaig, Jhpiego

This session presented findings from USAID's MCHIP FP integration activities in Kenya, Afghanistan and Nigeria. Activities are based on a body of peer-reviewed evidence supporting integration of FP services with non-MNCH services, including: rationale; women's preferences; client satisfaction; service quality related to provider time and skills, service organization; negative effects on other services; and clandestine FP use. In each country, the MCHIP project's approach to assessing and implementing FP and MNCH service integration included consulting policy makers, service providers, and women of reproductive age about their views on integrated service delivery. In Kenya and Afghanistan, results of the baseline survey showed that women of reproductive age preferred integrated services at baseline. Women in all countries were interested in FP information and were familiar with relevant services offered in facilities.

Over the course of three years, client acceptance of FP increased in all countries, and there was no evidence of a negative effect on MNCH services. Providers had positive attitudes towards integration, but cited staff shortages, lack of trainings, stockouts, infrastructure, and barriers in the community as challenges to success. Generalization of the project findings remains limited due to convenience sampling of sites and potential interviewer bias. In each country, FP use increased, providers found trainings helpful, women supported integrated services, and integration was feasible. Facilitating factors across countries were: knowledge and demand from the community; leadership and support from MOH; clinical capacity and human resources; and infrastructure, service delivery flow, job aids and tools

at the facility level. The project noted the need for alternative strategies in service organization to assure simultaneous FP/MNCH service provision, impact evaluations for integration projects, and monitoring clandestine use as an argument for integration.

Integrating FP within a Community-Based Maternal and Neonatal Health Program in Rural Bangladesh
Dr. Abdullah Baqui, Jhpiego

The presentation reported findings from the Healthy Fertility Study, which examined integrating FP with community-based MNCH in rural Bangladesh. Use of LAM, EBF, pregnancy spacing, pills and condoms were assessed, and adverse pregnancy outcomes were also tracked. In the intervention area, CHWs and community mobilizers counseled women up to one month postpartum on HTSP, LAM, and EBF; from two to five months postpartum, CHWs delivered counseling on contraceptive use, distributed pills and condoms, and referred women to facilities for other methods. The proportion of women exposed to FP communication materials grew from three to six months postpartum, reaching 90% in the intervention area while below 1% in the comparison area. Uptake of any modern method was greater in the intervention arm over three, six, and twelve months of follow-up, rising from 13% to 41% and from 10% to 25% in the intervention and comparison areas, respectively. Newborn health practices were also higher in the integrated FP-MNCH arm than the MNCH-only arm.

The Healthy Fertility Study demonstrated the feasibility of service integration, the positive effect on the use of LAM and modern methods, lack of negative effects on the delivery of MNCH services, and the positive effect of LAM promotion on the duration of exclusive breastfeeding. The study found community meetings targeting husbands and mother-in-laws, as well as distribution of pills and condoms at homes, were essential to program success. The presentation noted the need for more research on cost, cost effectiveness, and qualitative research to address barriers to integration.

Integrating Family Planning into Essential Maternal and Newborn Care in Northern Nigeria
Dr. Koki Agarwal, Jhpiego

The presentation focused on results of the USAID-sponsored MCHIP project from a northern Nigerian MNCH-FP integration intervention. As a result of incorporating FP counseling during ANC and PPC, the proportion of women actually receiving FP counseling at those times increased moderately, and the proportion of women using a FP method increased significantly, from 1% to 15%. Counseling was provided by facility workers and CHWs, and included discussions with men and mother-in-laws, mobilizing older women to help women to use PNC services, and identifying community champions for PPFP. The presentation emphasized the need for an expanded method mix to reduce unmet need, to explore FP-child health links, and to examine costs and cost-effectiveness of integrated services.

The Compelling Case for Postpartum IUD (PPIUD)
Dr. Jeffrey Smith, Jhpiego

The presentation focused on the large body of evidence supporting PPIUD. It highlighted a 2001 Cochrane Review on PPIUD based on 29 studies. The review concluded: the practice was safe and effective; mothers had high motivation and found it convenient; providers could be assured that women were not pregnant at the time of insertion; there were few contraindications; the practice was feasible in geographically and culturally diverse locations; expulsion rates were higher than with interval

insertion; and early follow-up was important to identify spontaneous expulsion[4]. In Egypt, a study found that, among women who agreed to IUD placement during antenatal or postpartum FP counseling, 71.2% who preferred immediate postpartum placement actually had IUD insertion, compared to 7.1% who preferred interval IUD insertion[5]. He also presented results from a 1993 study in Peru, in which the cost for immediate PPIUD (US$9) was less than the cost for interval insertion ($24) due to eliminated extra consultation costs[6]. Separately, an expert panel had found that uterotonics and fundal massage did not increase the risk of IUD expulsion, and there was no increase in expulsion or perforation associated with AMTSL.

Further evidence was presented in support of PPIUD, including the absence in any literature of perforations due to IUDs when inserted at the right time, low infection rates negating the need for widespread prophylactic antibiotics, and normal postpartum symptoms masking the cramping and bleeding associated with new IUD insertion. In a Kenyan provincial general hospital, 76% of women who elected to have PPIUD insertion were still using the method three to six months afterwards, while 6% had the IUD removed and the IUD was expulsed in 17% of women. Nearly all of the women (97%) would choose PPIUD again, as well as recommend it to their female relatives and friends (95%).

Key Themes

Coverage, Quality, Effectiveness, Equity, Use, and Health Outcomes

Evidence presented in a systematic review of PPIUD, peer-reviewed articles, and ongoing evaluations of current projects suggests that integrating FP services into ANC and PPC has a positive effect on coverage, use, effectiveness, and, as one study suggests, on cost. Client satisfaction also increased where measured, as women preferred integrated services to multiple provider visits. Integrated FP service sites in Matlab, Bangladesh showed a positive impact of integration on neonatal and maternal mortality when compared to control sites. The systematic review of PPIUD found no evidence of any negative effects of service integration from the 29 studies reviewed. Positive effects seen in all individual projects cited during the consultation were more impactful than the few negative or mixed effects reported. The evidence overwhelmingly supports scale up of integrated FP-ANC/PPC services, although its effect on equity and health outcomes is not measured.

Best practices

The consultation resulted in the identification of several best practices, including: providing FP methods and services at home through CHWs; appropriate service organization strategies to ensure simultaneous provision of both MNCH and FP services; gaining the support of providers, Ministry of Health officials, and other key stakeholders; adequately training and equipping providers to respond to local FP needs; and increasing demand within the community by working with women, husbands, and mother-in-laws.

Barriers

[4] Grimes DA, Schulz KF, Van Vliet H, Stanwood N, Lopez LM. Immediate post-partum insertion of intrauterine devices. *CochraneDatabase of Systematic Reviews* 2001, Issue 2. Art. No.: CD003036.

[5] Mohamed S, Kamel M, Shaaban O, Salem H. Acceptability for the use of postpartum intrauterine contraceptive devices: Assiut experience. *Medical Principles And Practice: International Journal Of The Kuwait University, Health Science Centre* [serial online]. July 2003;12(3):170-175.

[6] Foreit KG, Foreit JR, Lagos G, Guzman A. Effectiveness and Cost-Effectiveness Of Postpartum IUD Insertion in Lima, Peru. *International Family Planning Perspectives.* Mar 1993:19(1): 19-24+33

Health systems are composed of structures that, by nature, resist change and exist as silos that compete for funding and control. Achieving buy-in from various levels of staff, from directors to managers to providers, is also a challenge. Additional evidence, combined with strategic advocacy is needed to convince governments to integrate services at the national level. Evidence from pilot programs demonstrating successful integration services is a necessary first step, but much more investment and commitment is required to accomplish scale-up and institutionalization.

Gaps in Research and Next Steps
Several research gaps were also identified. To date, only one study appears to have determined cost and cost-effectiveness of integrating services. Barriers to and facilitators of integration, quality of services, and policy- and decision-makers' desire to integrate services must be further examined, as should the incorporation of performance-based financing and health systems strengthening activities. The provider perspective on integration has received little attention, and issues of supervision, pre-service training, health worker capacity and time demands must be determined. More needs to be known about optimizing ANC counseling for PPIUD, management of delayed descent of IUD strings, differences in success by instrument for insertion, tracking clients post insertion, and levonorgestrel IUS as PPIUD. So far, little research has been conducted on scale-up or sustainability. Appropriate research designs to accurately monitor and evaluate integrated programs was itself a topic which participants felt needed more attention.

In conclusion, integrated FP-ANC/PPC services are safe, acceptable, feasible, and effective, but additional research could fill gaps in knowledge and add significant strength to the case for integration. More resources must be devoted to monitoring and evaluation, and resulting best practices must be documented and shared. Those efforts should serve as the basis for expanding FP-ANC/PPC integration, as well as FP with a wider range of health services.

2. FP-PAC

Summary of Presentations

Integration of FP into Decentralized Comprehensive Postabortion Care (cPAC) Services: A Case Study of Tanzania
Dr. Roy Jacobstein, EngenderHealth

Through a project to decentralize and integrate FP into cPAC services, the RESPOND project trained 293 Tanzanian health care workers and established FP counseling and services in 224 cPAC sites in 21 districts. In the second and third years of the project, an increased number of cPAC clients were counseled on FP methods and accepted a FP method. Facilities encountered challenges maintaining access to necessary FP and cPAC equipment and commodities, as well as creating awareness in communities about unsafe abortion and miscarriage that would have further increased demand for integrated services.

Decentralization of Comprehensive and Integrated Postabortion Care/ FP in Senegal
Dr. Boniface Sebikali, IntraHealth International

Beginning in 2008, FP and malaria services were integrated into PAC, which had been running as a vertical program for nine years. As a result, 323 sites began providing FP services, and the proportion of PAC/FP services delivered in health centers rose from 68% in 1995 to 95.6% in 2009. The percentage of PAC patients who accepted FP before discharge also rose from 15% in 2003 to 45% in 2009. The cost

of the project was $675,000 and the per-site cost for 323 sites was $2,190. Decentralized services increased FP-PAC coverage, as FP may have been previously unavailable in project sites.

Impact of Community Postabortion Care on Postabortion Family Planning: Evidence from Bolivia, Peru & Kenya
Ms. Ellen Israel, Pathfinder International and Ms. Lynn Van Lith, EngenderHealth

The CATALYST project in Bolivia and Peru and YFPAC Kenya are conducting similar FP-PAC integration projects. The projects use slightly different approaches in each country, but each works with community leaders and addresses FP and GBV, in addition to PAC. In Bolivia, knowledge of at least one FP method and use of a FP method at last sexual intercourse increased from 88.3% to 94% and 45.6% to 54.2%, respectively. In Kenya, data from the only facility which maintained consistent records showed that 99% of adolescent PAC clients had received FP counseling, and 72% had accepted a modern method. Under the RESPOND project in Kenya, which integrates FP and PAC services, new family planning visits increased from 2,034 to 4,362, and return visits increased 61%.

Postabortion Family Planning: A Strategy for Increasing Access to and Use of Contraception in the Eastern Europe and Eurasia Region
Dr. Nino Berdzuli, John Snow Inc.

The presentation illustrated the high unmet need for FP in the Eastern Europe and Eurasia region. The SUSTAIN project in Georgia focused on increasing access to FP-PAC services by training over 1000 providers in post-abortion family planning. Counseling for FP increased from 38.6% to 86.5% between 2008 and 2010, and immediate post-abortion IUD placement increased from 0.2% to 4.7%. The proportion of women accepting oral contraceptives increased from 7% to 34%. In the Ukraine, from 2007 to 2011, under the TfH project, over 2500 providers in 15 regions were trained in post-abortion family planning. Russia's MCHI project scaled up FP-PAC to 114 facilities in 16 regions from 2003 to 2007. FP-PAC counseling increased from 83.4% to 95.9%, and the proportion of post-abortion clients intending to begin using a modern FP method increased from 66.5% to 86%.

Key Themes

Coverage, Quality, Effectiveness, Equity, Use, and Health Outcomes
Two projects measured the cost of FP integration or decentralization, with per-site costs of $2,190 in Senegal and $762 in Tanzania. The effectiveness of FP-PAC integration was not measured using methodologies that isolate the effects of the interventions. Impact and cost-effectiveness are, therefore, not known, although the existing evidence is promising. Coverage of FP services increased among PAC facilities, and the presentations stated that coverage of the general population increased through integration efforts. While there were signs of increased use, more rigorous evaluation designs are needed to measure use, as well as equity and health outcomes.

Best practices
Among the four presentations, several practices stood out as either vital to making integration work or increasing the impact of integrated programs. These included: improving FP regulatory framework and policies; including relevant trainings into pre-service medical education; initial piloting before scale-up; task shifting to lower cadres where possible; support for training and mentoring providers and facility leadership; ensuring commodities and equipment and providing free contraceptives for the most disadvantaged; ensuring availability of contraceptives in treatment rooms; including MVA on essential medicine list; and engaging communities to increase demand and link them with facilities.

Barriers
Two projects noted that assigning some FP services to CHWs might overburden them. Stigma surrounding abortion and acceptance of FP, including by providers, were mentioned as challenges, as was commodity security. The lack of national and local leadership and a lack of supervisory capability made the implementation and success of integration difficult.

Gaps in Research and Next Steps
Most of the evidence presented was anecdotal or based on evaluation designs that lack the rigor to attribute causality or isolate the positive effects of integrated services. Therefore, the case for FP-PAC could be strengthened considerably through rigorous evaluation. Cost and cost-effectiveness must be included in these efforts, as should the effectiveness of different interventions to increase FP counseling and uptake at PAC visits. Conceptual frameworks for integration exist, and the FP-PAC community could begin to focus on documenting case-studies and scale-ups. Successes and best practices should be shared through South-to-South technical assistance. A clear set of recommendations, procedures, and strategies for achieving FP-PAC integration in diverse circumstances are needed to facilitate implementation and evaluation.

3. FP-IMMUNIZATION

Summary of Presentations

A Shot in the Arm? FP and Immunization Integration
Ms. Kate Rademacher and Ms. Gwyneth Vance, Family Health International

This presentation covered the results of an FP-EPI integration intervention conducted in Ghana and Zambia. Vaccination providers were trained to deliver individualized HTSP messages to women bringing their infants for EPI. The individualized part of the intervention relied on vaccinators assessing a woman's risk of pregnancy based on LAM using a job aid. Results of the rigorous study, with pre-/post-tests in intervention and control clinics, showed no significant differences in the four measures of HTSP knowledge in either country between pre- and post-tests, although there were modest increases in knowledge among all groups. Qualitative results showed that a large proportion of vaccinators used the tool in group health talks, and some delegated the task to CHWs. In Zambia, the job aid conflicted with current training. While the intervention did not prove effective, qualitative results suggest that effectiveness could be increased by conducting the intervention with fidelity and embedding processes into the management structure of facilities.

Integrating Family Planning Services into EPI: The Polomolok Experience in the Philippines
Ms. Catherine Fort, RTI International

In the Philippines, this intervention capitalizes on the fact that mothers make four to five visits to child health service delivery points over the infant's first 11 months of life, and there is good awareness of infant and child immunization services. In this ten-month intervention, providers at multiple levels provided three verbal messages on the relevance and accessibility of FP to new mothers, measured standard facility data, and gave KAP surveys to a randomly selected sample of mothers of reproductive age who brought their child in for immunizations. There was a 38% increase in the number of FP acceptors after ten months, a 6% increase in the CPR, a shift in method preference from traditional to modern methods, and an increase in health centers as the primary source of FP information, from 47% to 87%. There did not appear to be any negative effects on immunization, as the coverage rate rose from 96% to 99% between 2008 and 2009 during the project.

Integrating FP Service Provision into Immunization Clinics in Mali
Ms. Maxine Eber, PSI

A FP-Immunization integration intervention in Mali aimed to address high unmet need for FP among postpartum women and increase the use of long-acting, reversible methods. Midwives employed by PSI delivered presentations at clinic immunization events, and women could elect to receive an IUD or implant on the same day. The project was piloted in five PSI-operated ProFam clinics and expanded to 51 public clinics in 2009-2010, and 72 public clinics in 2011. A total of 2,258 presentations were made to 92,262 women, mostly in public sector clinics, and 24% of women chose to receive an IUD or implant the same day.

Testing a FP/MNCH Integration Model: Postpartum Systematic Screening in Northern Nigeria
Ms. Elaine Charurat, Jhpiego

In Northern Nigeria, a postpartum intervention based at immunization and other newborn care sites trained a range of providers to deliver FP counseling through a systematic screening tool. Prior to the intervention, few providers were delivering any FP counseling, despite the great unmet need for FP in the client population. The project measured indicators at baseline and three-month follow-up with a convenience sample of women visiting clinic sites. Among women with FP need, the percentage counseled on FP by a provider during their visit increased from 16% to 68% ($p<0.05$), and the percentage referred for FP services by a provider increased from 5% to 41% ($p<0.05$). There was also increased screening for other services, including postnatal care (13% to 57%, $p<0.05$) and immunizations for children under five who were not fully immunized (47% to 89%, $p<0.05$). Specific FP counseling indicators each increased, and providers were more likely to counsel pregnant or postpartum women on FP (13% to 100%, $p<0.05$). Providers who had been given the training were more likely to know at least three FP methods (73% vs. 27%, $p<0.05$). The systematic screening and tool were effective at integrating FP counseling and referrals; however actual service use did not increase dramatically. No negative effects were seen in immunization, newborn care, or pediatric/sick baby services.

Key Themes

Coverage, Quality, Effectiveness, Equity, Use, and Health Outcomes
It was not possible to determine the impact of any of the projects, and each cited the need to continue studying FP-immunization integration with rigorous study designs. Coverage of FP services likely increased, as the facilities which began providing FP in addition to immunization services had not been offering them consistently or at all prior to the interventions. Current data did not show whether the women served had received FP services at other locations; however, most interventions took place at multiple health facilities and reached hundreds or thousands of women who had unmet need for FP. All projects showed positive effects through some FP indicators, although more research must be conducted to attribute causality. Importantly, there were no negative effects on immunization services in any intervention. Integration cost was not available for any project, although costs will be evaluated in Mali, and the Nigerian case cited minimal additional resources as a key finding.

Best Practices
Several activities and tools facilitated integration, including systematic screening, conducting clinical histories, maintaining a health book, and mHealth. Making FP services immediately available, instead of providing referrals, could increase the proportion of women who accept a FP method. Sharing data between FP and immunization service, and making use of those data, strengthened each individual

program. Integration required local ownership and active reinforcement by leadership, as well as tailoring the integration approach to the existing service organization.

Barriers
Finding persuasive messages to use in the immunization setting will require more research. Maintaining FP supplies at immunization clinics was a challenge, and there was a lack of any information system for commodity security. Referral systems could be improved, and staff shortages and space issues could present obstacles to integration. There was also a need to identify the benefit of integration for immunization services.

Gaps in Research and Next Steps
Practical models for integration should be explored—for example, should immunization providers counsel on and distribute FP methods themselves, or should they make referrals? The skills necessary to provide dual services, when to deliver trainings for those skills, and to which cadre of providers must all be examined further. Commodity security, specifically the commonalities between FP and vaccine supply chains, should be studied to determine how the demand for FP supplies can be met. The FP-immunization integration field should identify champions in the immunization and well-baby community, as well as the youth health community, as these areas could also benefit from integrated services. More advocacy and outreach needs to be done, and myths about links between FP and sterilization and immunization must be addressed.

4. FP- NUTRITION

Summary of Presentations

Lactational Amenorrhea Method, Exclusive Breastfeeding and Family Planning – Why Integration Makes Sense
Dr. Justine A. Kavle, GU-IRH and Ms. Barbara Deller, Jhpiego

LAM reinforces exclusive breastfeeding for six months, which has a positive effect on infant nutrition. Many countries have high rates of full breastfeeding from three to six months postpartum, but none of them have high rates of LAM. Using advocacy, messaging, and integrating LAM promotion with ANC, pre-discharge, PNC, and well-child care, results have been achieved in multiple countries. In Bangladesh, messages promoting LAM and dispelling misconceptions were given in community meetings to groups of male/female community members. Exclusive breastfeeding was higher among the intervention group than the control group through each of the first six months postpartum, and contraceptive use was higher among the intervention group than the control group after LAM had ended, 12 months postpartum (40% vs. 25%). In Jordan, those who had used LAM were more likely to be using a FP method at 12 months than those who had breastfed or used traditional methods (41%, 23%, and 13%, respectively).

Inter-Pregnancy Interval and Maternal Depletion – Does Birth Spacing Affect Maternal and Infant Nutritional Status?
Dr. Rolf Klemm, Johns Hopkins Bloomberg School of Public Health

This presentation focused on the case for HTSP through a nutrition lens. Results of the JiVitA-1 sub-study in Bangladesh showed a clear and significant positive trend of increased birth to pregnancy interval on weight, BMI, and MUAC. Seven of 14 studies conducted on maternal depletion showed levels of micronutrients, maternal BMI and weight, and skinfold thickness were positively correlated with the

length of pregnancy interval, six studies showed no relationship or lacked statistical significance, and only one study found a negative correlation[7]. Further results from the same review showed that approximately 50% of 57 studies conducted on interpregnancy interval and child nutritional status found a positive correlation and only one study found a negative, while the remainder showed no correlation or significance. A Bangladesh study found that weight, BMI, MUAC and body fat each decreased from the previous year in primiparous pregnant girls, while the same measures increased in their non-pregnant, matched counterparts[8].

Integrating Family Planning and Counseling on Nutrition for Children 6-23 Months
Dr. Rae Galloway, PATH

Evidence suggests that increasing birth intervals have a positive effect on stunting and underweight in children under five[9, 10]. Despite the evidence supporting HTSP, FP messages are largely absent from interventions that promote breastfeeding after the sixth month postpartum[11, 12]. An integrated nutrition intervention in India found that the FP and immunization messages had been delivered, but only a minority of participants remembered nutrition messages[13]. There are opportunities to better integrate FP-nutrition messages where interventions already reach mothers of infants and young children.

Practices for Integrating Family Planning into Child Nutrition Programming: A Work in Progress
Ms. Adrienne Allison, World Vision

FP indicators were among those measured by a nutrition-focused intervention in Haiti that distributed food rations to women who participated in 'Mothers' Clubs' during which contraception was discussed and community health agents provided FP supplies, including injectables. The project trained 250 community health agents to deliver these messages and services to 8000 lactating and pregnant women. Over four years of the project, the birth-to-birth interval increased from 30 to 41 months.

In Uttar Pradesh, India, a Timed and Targeted Counseling MNCH intervention followed pregnant women from ANC through 24 months postpartum and included information on nutrition during and after pregnancy, as well as FP counseling, condoms and pills. HTSP messages were in five of the 18

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[7] Dewey K, Cohen R. Does birth spacing affect maternal or child nutritional status? A systematic literature review. *Maternal & Child Nutrition* [serial online]. July 2007;3(3):151-173.

[8] Rah J, Christian P, Shamim A, Arju U, Labrique A, Rashid M. Pregnancy and lactation hinder growth and nutritional status of adolescent girls in rural Bangladesh. *The Journal Of Nutrition* [serial online]. August 2008;138(8):1505-1511.

[9] Dewey K, Huffman S. Maternal, infant, and young child nutrition: combining efforts to maximize impacts on child growth and micronutrient status. *Food And Nutrition Bulletin* [serial online]. June 2009;30(2 Suppl):S187-S189.

[10] Rutstein S. 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. *International Journal Of Gynaecology And Obstetrics: The Official Organ Of The International Federation Of Gynaecology And Obstetrics* [serial online]. April 2005;89 Suppl 1:S7-S24.

[11] Chapman D, Morel K, Anderson A, Damio G, Pérez-Escamilla R. Breastfeeding peer counseling: from efficacy through scale-up. *Journal Of Human Lactation: Official Journal Of International Lactation Consultant Association* [serial online]. August 2010;26(3):314-326.

[12] Haider R, Kabir I, Huttly S, Ashworth A. Training peer counselors to promote and support exclusive breastfeeding in Bangladesh. *Journal Of Human Lactation: Official Journal Of International Lactation Consultant Association* [serial online]. February 2002;18(1):7-12.

[13] Bhandari N, Mazumder S, Bahl R, Martines J, Black R, Bhan M. An educational intervention to promote appropriate complementary feeding practices and physical growth in infants and young children in rural Haryana, India. *The Journal Of Nutrition* [serial online]. September 2004;134(9):2342-2348.

messages delivered to both women and men. Over 18 months of the project, CYP rose from 2,000 to 10,900.

Key Themes

Coverage, Quality, Effectiveness, Equity, Use, and Health Outcomes

There is significant evidence showing the positive association between FP effects and maternal and child nutrition, and the overwhelming majority of results presented from current projects and past research points towards the effectiveness of integrating FP and nutrition services. However, more research must be done to isolate effects and attribute causality. FP service figures increased when associated with food programs, exclusive breastfeeding increased when it was associated with LAM, and in turn LAM users were more likely to adopt a modern method of family planning after six months postpartum. These results suggest that coverage and use had increased. Cost, cost-effectiveness, equity, health outcomes, and quality were not examined in these presentations, and remain an area for further research.

Best Practices

Several studies showed LAM users are more likely to use FP than non-LAM users. Countries where LAM is already prevalent – like Mali – respond well to FP messages, whereas countries that do not typically practice LAM, such as India, are often more resistant, and these differences must be taken into account. Working at the community level with CHWs, using counseling tools and job aids, and simple and culturally appropriate BCC materials were key elements of success. Policy-level advocacy was necessary to facilitate programming. Integrated services should be delivered at all points of contact, from ANC through 23-months postpartum, both in individual and support/peer group contacts.

Barriers

Nutritionists and FP practitioners are not trained in the other's perspective, and some country ministries separate breastfeeding and nutrition; this prevents effective messages from being delivered about exclusive breastfeeding and LAM which would benefit FP and nutrition. The quality of counseling for LAM is currently low, such that women often do not understand LAM or its three components. Counseling to account for local cultural expectations of mother-in-laws and husbands, as well as around the transition from exclusive to complementary breastfeeding at six months, are difficult in most environments. Currently, the Tiahrt amendment also adds to the workload of designing and funding integrated services.

Gaps in Research and Next Steps

Overall, there is little literature on FP-nutrition integration, and programmatic evidence is lacking. A major barrier to addressing the gap is the lack of an agreed-upon research agenda to provide direction to the field. The community perspective and satisfaction with FP-nutrition integrated services is an area that has not received any attention and should also be explored. Advocacy tools, training curricula, job aids, and behavioral change materials are absent, but could be developed based on existing and new research. There is also a large missed opportunity in emergency response food programs. By taking action on developing a research agenda and conducting advocacy with donors, partners and researchers at all levels, FP-nutrition integration proponents could build a strong case and build momentum for the field.

CONCLUSIONS

The following section summarizes the overall consensus and main conclusions reached in the FP-MNCH-Nutrition Technical Consultation for each key area.

Integrated services have had a positive effect in service coverage and use; a larger body of evidence is needed to determine their impact, cost, quality, and effectiveness.

1. The Cochrane Review and other program presentations indicate that there are positive effects when multiple services are offered at each health checkpoint, especially for increasing knowledge and uptake of healthy behaviors. However, the evidence body is quite thin; only 29 studies, with a low level of rigor (averaging 3.2 on a scale of 9), qualified for the systematic review. Moreover, the Cochrane Review is based on published studies, and is thus likely to show bias towards positive findings. There were few studies on maternal and infant nutrition and intrapartum/childbirth.
2. Studies predominantly showed integrated services led to increases in health coverage and use, with less evidence on effectiveness, quality, impact, costs or sustainability. More long-term, scientifically designed studies are needed to inform these areas.
3. There was no evidence presented of significant negative effects or harm from integration of services.

"Best practices" that lead to effective, integrated services:

1. Political support to create an environment conducive to integration and champions with the authority and will to restructure service delivery platforms
2. Motivated community health workers and health providers with excellent grasp of information and time to commit to integrated service delivery
3. Proper training and tools to facilitate screening and identification of target clients
4. Strong indicators, data-gathering, and information systems that use results to inform program actions

Barriers to effective integration:

1. Different services often exist in silos within health systems with different funding sources/structures
2. Lack of strong evidence/rigorous studies that prove the value of integration, especially locally generated evidence
3. Lack of integration experience with introducing comprehensive system change
4. Community health workers are often overburdened, decreasing their efficacy in delivering each integrated service
5. Knowledge in each integrated service is often lacking
6. Cultural expectations/norms that resist new services
7. Structural inadequacies and weak health systems
8. Lack of well-positioned advocates willing to assume the role of change agents

Current gaps:

1. A comprehensive research agenda with studies designed with greater rigor, quantitative analysis, and proven longitudinal success are needed to achieve buy-in from governments, ministries, and organizations. Studies of costs are imperative.
2. More high quality monitoring and evaluation is needed
3. Clear "instructions" on the logistics of integrating services
4. Advocacy platforms based on state-of-the-art learning and champions to promote integration at local and national levels

NEXT STEPS

1. **Build upon the growing knowledge, engagement and creative thinking generated in the technical consultation.** To mobilize expertise moving forward, follow the successful lead of the FP-HIV group and convene a yearly consultative meeting to disseminate current learning, inspire new plans, and share strategies. As a complementary mechanism, form technical working groups around each of the four models, drawing on the expertise of cooperating agencies and partners at the first meeting. These groups can report on progress in their specific areas at the annual consultation.
2. **Develop a comprehensive research agenda that builds a large body of data on the comparative impact associated with different health services integrations.** A common theme through all the working groups and plenary sessions was the relative dearth of rigorous studies with cost analyses and long-term results. A strong research basis will act as a foundation for future FP-MNCH-Nutrition integration by documenting blueprints for success and creating advocates for scale up.
3. **Embed operational research and substantial monitoring and evaluation into implementation activities to generate evidence for governments that integration is both feasible and worthy of investment.** Prospective, long-term impact and cost analyses are two of the most important indicators for governments to consider; leaders of national health systems desire highly effective integrations at reasonable costs. Studies with direct comparisons between integrated and non-integrated services are one clear way to show this.
4. **Publish more studies with strong scientific rigor and longitudinal data in peer-reviewed journals.** Creating an extensive and compelling body of evidence is a foundation for advancing the integration of health services.
5. **Document "how to" processes, logistics, and procedures as guidance on integrating services based on local evidence and previous experience.** Both national and local shareholders require clear, definitive instructions on health services integration. Integrations vary from one context to another, and instructions should take local conditions into consideration. Similarly, detailed information on successful integrations can act as blueprints for future countries and organizations.
6. **Develop an overall advocacy strategy to achieve scale-up of health service integration and promote development of national strategies predicated on country interests and capacities.** The most successful FP-MNCH-Nutrition integrations have been led by champions who supported changes in health service delivery.

APPENDIX

Appendix 1: Meeting Agenda for FP-MNCH-Nutrition Technical Consultation

Appendix 2: Systematic Review of Integration of Maternal, Neonatal, and Child Health and Nutrition and Family Planning (Cochrane Report)

1. Meeting Agenda

FP-MNCH-Nutrition Integration Technical Consultation
Wednesday March 30, 2011

The Hotel Palomar
2121 P Street
Washington, D.C. 20037

8:30-9:00	**Registration**
9:00-9:15	***Introductions/Purpose of the Technical Consultation*** Facilitators: Ms. Ellen Israel, Senior Reproductive Health Advisor, Pathfinder International Dr. Blami Dao, Director, Maternal and Newborn Health, Jhpiego Ms. Stephanie Martin, Behavior Change Communication Specialist, IYCN, PATH
9:15-9:30	***FP-MNCH-Nutrition Integration Overview/Setting the Stage*** Dr. Susan Brems, Senior Deputy Assistant Administrator, Bureau for Global Health, USAID
9:30-10:30	***Systematic Review of Integration of Maternal, Neonatal, and Child Health and Nutrition and Family Planning*** Dr. Deborah Bain-Brickley, Senior Researcher, University of California, San Francisco
10:30-10:45	**Tea & Coffee Break**
10:45-11:45	***The Impact of Integrated FP-MCH Services on Infant, Child, and Maternal Mortality in Matlab, Bangladesh*** Dr. Julie DaVanzo, Adjunct Senior Economist, RAND Corporation Dr. Mizanur Rahman, Senior Researcher and Independent Consultant
11:45-1:00	**Lunch/Presentation:** ***Meeting the Family Planning Needs of Postpartum Women*** Dr. Ricardo Vernon, Senior Associate / Partner, Investigación en Salud y Demografía (INSAD)
1:00-3:00*	**Concurrent Technical Sessions 1 & 2, including Group Work** **Session 1:** ***FP-ANC/Immediate and Facility/Community-Based Postpartum Care*** Facilitator: Dr. May Post, Senior FP/RH Advisor, ESD Project Facilitator: Ms. Holly Blanchard, Senior FP/RH Advisor, Jhpiego 1. *Examining MNCH/FP Integration: Assessment Findings from Afghanistan, Kenya, and Nigeria* – Dr. Catharine McKaig, Jhpiego 2. *Integrating FP within a Community-Based Maternal and Neonatal Health Program in Rural Bangladesh* – Dr. Abdullah Baqui, Jhpiego 3. *Integrating Family Planning into Essential Maternal and Newborn Care in Northern Nigeria* – Dr. Koki Agarwal, Jhpiego 4. *The Compelling Case for Postpartum IUD (PPIUD)* – Dr. Jeffrey Smith, Jhpiego

	Session 2: *Postabortion Family Planning* Facilitator: Ms. Carolyn Curtis, Public Health Specialist/Nurse Mid-Wife, USAID Facilitator: Dr. Kamlesh Giri, Senior Technical Advisor, ESD Project 1. *Integration of FP into Decentralized Comprehensive Postabortion Care (cPAC) Services: A Case Study of Tanzania* – TBD, EngenderHealth 2. *Decentralization of Comprehensive and Integrated Postabortion Care/ FP in Senegal*- Dr. Boniface Sebikali, IntraHealth International 3. *Impact of Community Postabortion Care on Postabortion Family Planning: Evidence from Bolivia, Peru & Kenya* – Ms. Ellen Israel, Pathfinder International and Ms. Lynn Van Lith, EngenderHealth 4. *Postabortion Family Planning: A Strategy for Increasing Access to and Use of Contraception in the Eastern Europe and Eurasia Region* – Dr. Nino Berdzuli, John Snow Inc. *1:00-2:00 Panel Presentations and Q&A *2:00-3:00 Complete Group Work in Concurrent Sessions 1&2
3:00-5:00*	**Concurrent Technical Sessions 3 & 4, including Group Work** **Session 3: FP-Immunization/Well Baby** Facilitator: Dr. Catherine McKaig, Family Planning Team Leader, Jhpiego Facilitator: Dr. Nahed Matta, Senior Maternal and Newborn Health Advisor, USAID 1. *A Shot in the Arm? FP and Immunization Integration* – Ms. Kate Rademacher and Ms. Gwyneth Vance, Family Health International 2. *Integrating Family Planning Services into EPI: The Polomolok Experience in the Philippines* – Ms. Catherine Fort, RTI International 3. *Integrating FP Service Provision into Immunization Clinics in Mali* – Ms. Maxine Eber, PSI 4. *Testing a FP/MNCH Integration Model: Postpartum Systematic Screening in Northern Nigeria* – Ms. Elaine Charurat, Jhpiego **Session 4: FP-Nutrition** Facilitator: Ms. Elaine Menotti, Technical Advisor, USAID Facilitator: Ms. Jennifer Bergeson-Lockwood, Technical Advisor, USAID 1. *Lactational Amenorrhea Method, Exclusive Breastfeeding and Family Planning – Why Integration Makes Sense* – Dr. Justine A. Kavle, GU-IRH and Ms. Barbara Deller, Jhpiego 2. *Inter-Pregnancy Interval and Maternal Depletion – Does Birth Spacing Affect Maternal and Infant Nutritional Status?* – Dr. Rolf Klemm, Johns Hopkins Bloomberg School of Public Health 3. *Integrating Family Planning and Counseling on Nutrition for Children 6-23 Months* – Dr. Rae Galloway, PATH 4. *Practices for Integrating Family Planning into Child Nutrition Programming: A Work in Progress* – Ms. Adrienne Allison, World Vision *3:00 to 4:00 Panel Presentations and Q&A *4:00 to 5:00 Complete Group Work in Concurrent Sessions 3&4
5:00-5:20	**Working Groups Report Out**

5:20-5:35	***GHI Overview/Closing Remarks*** Ms. Amie Batson, Deputy Assistant Administrator, Bureau for Global Health, USAID

2. Systematic Review of Integration of Maternal, Neonatal, and Child Health and Nutrition and Family Planning (Cochrane Report)

(next page)

Systematic Review of Integration of Maternal, Neonatal, and Child Health and Nutrition and Family Planning

BACKGROUND

The Global Health Initiative (GHI) places a strong emphasis on integrating programs to address broad development challenges, and also on providing a comprehensive package of services for the populations served (GHI 2010). At the international level, the importance of integrating maternal, neonatal, and child health and nutrition (MNCHN) with family planning (FP) is well recognized as a key strategy, particularly for reducing maternal and child mortality. These two areas were highlighted at the 1994 International Conference on Population and Development in Cairo (Family Health International 1995) and are integral to successfully achieving the 2015 Millennium Development Goals for improving maternal health (MDG 2010). In addition, a recent report by the United Nations Population Fund (UNFPA) and the Guttmacher Institute found that integrating MNCHN-FP services would cost approximately $1.5 billion less than providing MNCHN services alone (UNFPA 2009). Despite these facts, there is limited information and evidence to guide policy action and program efforts on integration. This review examines the evidence for MNCHN-FP integration, reviews the factors that promote and inhibit program effectiveness and discusses lessons learned.

KEY RESEARCH QUESTIONS

- What are the key integration models evaluated in the literature?
- What are the key outcomes from these integration approaches?
- What are the quality of the evaluation study designs and the quality of the data from these evaluations?
- What types of integration are effective in what context?
- What are some of the research gaps?
- How can future policies and programs be strengthened?

MNCHN AND FP INTEGRATION MATRIX

A total of 29 peer-reviewed studies were included in this review. The number in each box represents the number of studies that fall into each integration category (studies may fall into more than one category).

		Family Planning Interventions	
		Education and Counseling	Contraceptive Service/Commodity Provision
MNCHN Interventions	Antenatal Services	10	4
	Post-Abortion Care	10	7
	Intrapartum/Childbirth	3	2

	Services		
	Postnatal Care	11	7
	Infant/Child Services	16	10
	Maternal and Infant Nutrition	5	3

STUDY INCLUSION CRITERIA

- Published in a peer-reviewed journal (Jan 1990 - Apr 2010).
- Rigorous evaluation study that either compared before and after the intervention strategy was introduced (pre-post) or compared different models of integrating MNCHN and FP service delivery (comparison group).
- Intervention consists of an organizational or management strategy, organizational changes, process modifications, or the introduction of technologies aimed at integrating MNCHN and FP service delivery, or of different models of integrating MNCHN and FP service delivery. Both on-site delivery of services and referrals were considered integration for the purposes of this review, although these are different levels of integrating services.

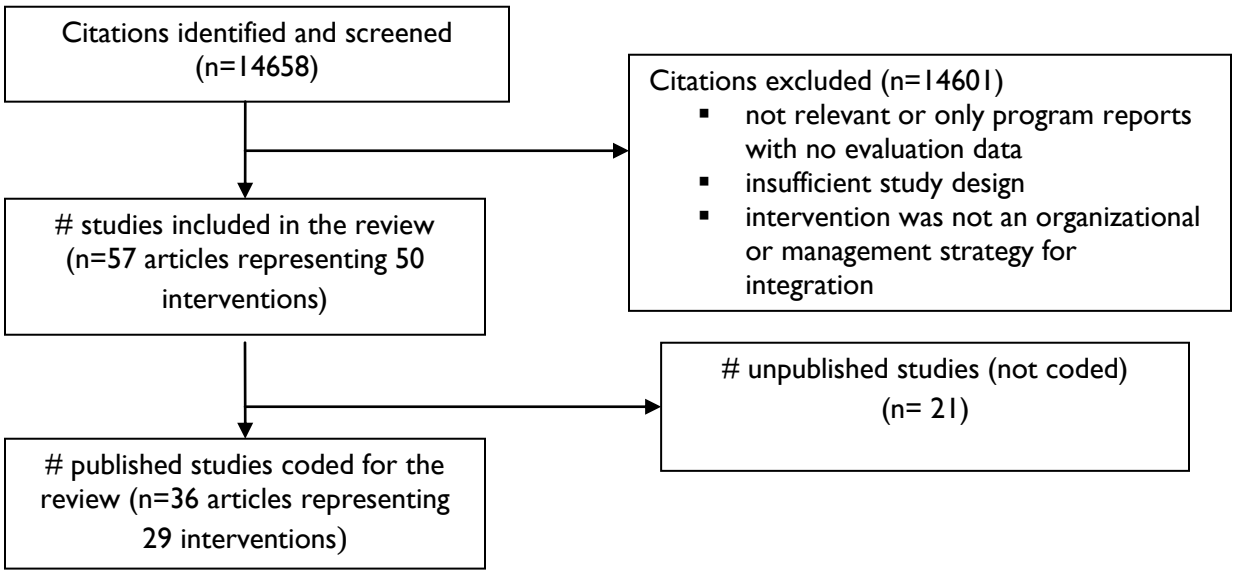

TABLE OF INCLUDED STUDIES

Study	Country	Intervention	Study Design	Sample Size	Key Outcomes
Agha, 2007	Nepal	A franchising network that offered FP services and referrals within the context of antenatal and postnatal care	Serial cross-sectional	Exit surveys: 1618 Before: 885 After: 733 Household surveys: 1907 Before: 941 After: 966	-Contraceptive use -ANC uptake -Client satisfaction
Alvarado, 1999	Chile	Breastfeeding and contraceptive services	Non-randomized trial – group	Before: 400 Int: 200	-Infant morbidity -Unintended

Study	Country	Intervention	Study Design	Sample Size	Key Outcomes
		offered at a clinic providing integrated maternal and infant care		Control: 200 After: 380 Int: 200 Control: 180	pregnancy -Infant growth -Contraceptive use -Breastfeeding -Quality of services
Amin, 2001	Bangladesh	An essential services package offering FP, immunizations, basic curative services, etc. through micro-credit volunteers	Non-randomized trial – group	1992: 656 1997: 3826 1998: 1768	-Infant mortality -Fertility -Contraceptive use -Immunizations -Uptake and availability of services
Barnet, 2007	USA	A home visit program for pregnant and parenting adolescents to reduce repeat pregnancies	Randomized trial – individual	Total: 84 Int: 44 Control: 40	-Repeat pregnancy -Condom use -Contraceptive use -Quality of services
Bashour, 2008	Syria	Home visits to offer support, including FP services, to women who had recently given birth	Randomized trial – individual	Total: 876 Group A: 285 Group B: 294 Control: 297	-Infant mortality -Maternal morbidity -Pregnancy -Immunization -Contraceptive use -Breastfeeding
Billings, 2003	Mexico	Manual vacuum aspiration and provision of family planning methods for post-abortion care	Cross-sectional	Total: 803 Group A: 251 Group B: 270 Control: 282	-Contraceptive use -Quality of services
Bolam, 1998	Nepal	Education on breastfeeding, FP, immunizations, and treatment of infant illnesses offered to postpartum women	Randomized trial – individual	Total: 540 Group A: 135 Group B: 135 Group C: 135 Control: 135	-Infant growth and mortality -Contraceptive use -Breastfeeding -Immunization coverage
Bossyns, 2002	Niger	Integration of FP within curative and under-fives consultations, and increasing provider responsiveness to clients	Serial cross-sectional	Total: NR Before: NR After: 3953	-Contraceptive use -Quality of services
Cissé, 2004	Senegal	Post-abortion care services were implemented to include manual vacuum aspiration, FP, and comprehensive	Serial cross-sectional	Total: 1013 Before: 374 During: 457 After: 182	-Contraceptive use -Uptake and quality of services -Cost of services

Study	Country	Intervention	Study Design	Sample Size	Key Outcomes
		reproductive health care			
David, 2007	Russia	Postpartum and post-abortion care providers were trained in providing FP counseling	Serial cross-sectional	Total: 1575 2000: 489 2002: 559 2003: 527	-Unplanned pregnancy -Contraceptive use -Quality of services
Debpuur, 2002	Ghana	Nurse outreach and traditional social cooperation were used to offer doorstep delivery of treatment of childhood illnesses, immunizations, and FP	Randomized trial – group	Total: 8998	-Infant and child mortality -Fertility -Contraceptive use
Delvaux, 2008	Cambodia	Post-abortion services were integrated into a government clinic, comprising antenatal care, FP, and management of STIs	Before-after	Total: 2224	-Maternal morbidity -Uptake of services -Quality of services
Douthwaite, 2005	Pakistan	Doorstep delivery of childhood immunizations, infant growth monitoring, FP, and treatment of minor ailments	Cross-sectional	Total: 4277 Int: 3346 Control: 931	-Contraceptive use
Fullerton, 2003	Ghana	FP providers were trained in provision of STI and PAC services	Case-control	Total: 43 Case: 24 Control: 19	-Uptake of services -Quality of services
Huntington, 1994	Togo	Referrals for FP services were provided during childhood immunization sessions	Serial cross-sectional	Total: 2179 Before: 1071 After: 1108	-Uptake of services
Johnson, 2002	Zimbabwe	Free, ward-based FP services and referrals were provided prior to discharge from post-abortion care	Non-randomized trial – group	Total: 2228 Int: 1355 Control: 873	-Unplanned pregnancy -Repeat abortion -Contraceptive use
Mahomed, 1997	Zimbabwe	FP counselors were hired to offer FP services at post-abortion care sites	Serial cross-sectional	Total: 2050	-Contraceptive use -Quality of services
Murray, 1990	Kenya	Health education, contraceptives, and immunizations were offered in a doorstep strategy	Cross-sectional	Total: 5351 Int: 1545 Control: 3806	-Infant mortality -Fertility -Condom use -Contraceptive use
Paxman, 2005	India	Community-based FP information, antenatal and postnatal care, and	Serial cross-sectional	Total: 784,400	-Contraceptive use -Immunization

Study	Country	Intervention	Study Design	Sample Size	Key Outcomes
		immunization services			coverage -Uptake, quality and cost of services
Nobili, 2007	Italy	Women seeking a termination of pregnancy received patient-centered FP counseling	Randomized trial – individual	Before: 43 After: 41	-Contraceptive use
Quinlivan, 2003	Australia	A postnatal home-visiting service for teenage mothers offered education about FP, vaccinations, and breastfeeding	Randomized trial – individual	Total: 136 Int: 71 Control: 65	-Infant morbidity -Contraceptive use -Breastfeeding -Immunization coverage
Routh, 2001	Bangladesh	A comparison of doorstep, clinic and community delivery of FP services, with and without antenatal and postpartum services	Non-randomized trial – group	Before: 1600 After: 1600	-QALYs gained -Births averted -Contraceptive use -Uptake and cost of services
Sathar, 2005	Pakistan	Client-centered services that integrated infant health, safe motherhood, and FP within reproductive health care	Serial cross-sectional	Providers Before: 78 After: 77 Community workers Before: 72 After: 86	-Quality of services
Solo, 1999	Kenya	Three different post-abortion FP models were compared	Non-randomized trial – group	Before: 481 After: 319	-Contraceptive use -Uptake of services
Sultan, 2002	Pakistan	Doorstep delivery a immunization, growth monitoring, FP, and health education	Cross-sectional	Total: 4676	-Contraceptive use
Vernon, 1993	Honduras	A client-oriented antenatal program that included FP and breastfeeding, and integrated postpartum and infant care	Serial cross-sectional	Total: 1440 Feb: 614 Oct: 344 Dec: 482	-Contraceptive use -Uptake of services -Quality of services
Warren, 2010	Kenya	A program offering continuum of care from pregnancy through postpartum that included FP counseling, breastfeeding, and newborn care	Serial cross-sectional	Total: 249	-Contraceptive use -Quality of services
Zhu, 2009	China	Two packages (essential or comprehensive services) of post-abortion FP services	Randomized trial – group	Total: 2336 Package A Before: 555 After: 555 Package B	-Pregnancy -Induced abortion -Condom use -Contraceptive

Study	Country	Intervention	Study Design	Sample Size	Key Outcomes
		were implemented		Before: 634 After: 592	use
MCH-FP program (6 articles)	Bangladesh	Doorstep delivery of antenatal care and nutrition, FP, safe delivery kits, and referral for complications	Several evaluations (all cross-sectional or serial-cross-sectional)	Range: 300 to 125,070	-Infant and maternal mortality -Infant/child growth -Contraceptive use -Attended deliveries -Quality of services -Cost and cost-effectiveness

OUTCOMES REPORTED IN THE INCLUDED STUDIES

Rigor score was assessed on a 9-point scale, with studies receiving one point for meeting each of 9 criteria: (i) prospective cohort; (ii) control or comparison group; (iii) pre-/post-intervention data; (iv) random assignment of participants to the intervention; (v) random selection of subjects for assessment, or assessment of all subjects who participated in the intervention; (vi) follow-up rate of 75% or more; (vii) comparison groups equivalent on socio-demographic measures; (viii) comparison groups equivalent at baseline on outcome measures; and (ix) control for potential confounders.

Studies were classified as having a positive, negative, mixed, or no effect on outcomes. A positive effect meant that the intervention was associated with an improvement in the outcome. A mixed effect meant that there were multiple measures of an outcome that showed inconsistent results. No effect meant that there was no difference in the outcome associated with the intervention. A negative effect meant the integrated intervention was associated with a worse outcome.

Outcome	# Studies reporting this outcome	Average rigor score of related studies	# Studies that showed improvement in outcomes	# Studies that showed a mixed or no effect
Health outcomes				
Mortality	6	3.78	1	5
Morbidity	5	4.40	4	1
Pregnancy	10	4.00	4	6
Unplanned pregnancy	4	3.75	2	2
Abortion	2	5.00	0	2
Infant/child growth	4	4.17	2	2
Behavioral outcomes				
Condom use	3	4.33	3	0
Contraceptive use	26	3.22	19	7
Breastfeeding	4	5.75	1	3
Process outcomes				
Unmet FP need	1	1.00	1	0

Vaccination coverage	4	3.50	1	3
Attended or safe deliveries	1	2.67	1	0
Uptake of FP or MNCHN services	12	2.22	11	1
Coverage of FP or MNCHN services	1	2.00	1	0
Quality of FP or MNCHN services	15	2.20	11	4
Cost or cost-effectiveness	4	2.17	4	0

Note: No studies found a negative effect on reported outcomes.

OVERALL FINDINGS FROM THE INCLUDED STUDIES

- A total of 36 peer-reviewed articles met the inclusion criteria, and they reported on 29 distinct interventions. Ten were conducted in Sub-Saharan Africa; nine in South Asia; three in Latin America; two in East Asia; and one each in Russia, Syria, Italy, U.S., and Australia.
- Seven studies used a randomized control trial design; most studies used less rigorous designs such as pre-post or cross-sectional with a comparison group. The average rigor score of the studies was 3.2 (range: 1-8).
- Integrating MNCHN and FP services was feasible. Across the variety of integration models, settings, and target populations, most studies reported that integration had a positive impact on reported outcomes; however, many studies also reported mixed effects or no effect on some outcomes. No studies reported negative outcomes due to providing integrated services, although this could be the result of publication bias, as studies are more likely to be published if they have positive results.
- 15 interventions included several MNCHN services; all other interventions offered only one type of MNCHN service.
- Eight interventions offered only FP counseling and education, without FP contraceptive services/commodity provision. Interventions that offered provision of contraceptive commodities in addition to FP counseling and education were more likely to report increased uptake of contraceptives compared to interventions that did not offer contraceptive commodities.
- Most studies that measured service use reported an increase in use due to integration (11 out of 15). Moreover, all but one study that measured the quality of services showed that quality improved after integration (11 out of 12).
- Few studies (4) reported on the cost of providing integrated services, and none of them found integration of services to result in increased costs. Although two studies did find initial costs of services to be higher for the provision of integrated services, over time, and with enhanced capacity utilization, the cost-effectiveness of providing integrated services (as measured by cost per birth averted and/or quality adjusted life years gained) was greater as compared to traditional services.
- An analysis of the four studies that compared co-located and referral services found that co-located services resulted in higher contraceptive and condom use, fewer unplanned pregnancies and induced abortions (though this was not statistically significant), and were more cost-effective (although with higher upfront costs).

ADDITIONAL FINDINGS FROM UNPUBLISHED STUDIES

- A total of 21 studies were identified that were not published in peer-reviewed journals, but otherwise met the inclusion criteria.
- Eleven studies offered comprehensive post-abortion care services, including FP. These were similar to the interventions offering post-abortion care represented by the published studies.

- Ten studies offered maternal and child health services, other than post-abortion care, with FP services. They varied as to the specific type of MNCHN services offered and the comprehensiveness of services.
- None of the studies presented interventions evaluated among the unpublished studies was found to fill integration matrix cells not already represented by the published studies. However, two unique interventions were identified different from the interventions from the published studies:
  - A study conducted in Egypt evaluated the effect of birth spacing messages that targeted men through influential people in the community on uptake of MNCHN and FP services. The intervention yielded positive results: change in knowledge and attitudes of birth spacing among women, enhanced use of post-partum FP, and increased utilization of FP services at clinics, especially among low-parity women. However, fear of FP side effects remains an obstacle to achieving healthy birth intervals.
  - A study conducted in India evaluated the effect of an intervention involving men in their wives' antenatal and postnatal care on several outcomes, including contraceptive and condom use, breastfeeding, vaccination coverage, and quality and cost of services. Knowledge of condoms for dual protection and breastfeeding as a FP method increased in both men and women, with a significant uptake of condom use postpartum. Infant vaccination coverage were uniformly high pre- and post-intervention. Clients were satisfied with the modified package of services; provider time and increase in material costs were found to be feasible and sustainable.

FACTORS PROMOTING OR INHIBITING EFFECTIVE INTEGRATION

Promoting Factors:

- Stakeholder support and interest in integration, including country-level support
- Effective provider training, continuing education and supervision
- Availability of a large selection of contraceptives, and/or free contraceptives
- Client-centered education and counseling and emphasis on quality of care
- Involvement of men and male endorsement of FP
- Involvement of traditional health workers
- Availability and accessibility of a high-quality static health clinic (for community-based interventions)

Inhibiting factors:

- High workload, staff turnover and resistance to changing practices
- Cost and logistics of commodity procurement and supply
- Social constraints and cultural barriers to adoption of contraception
- High cost of provider training, deployment of community health workers
- Lack of coordination between providers (e.g. for combined maternal and infant health visits)
- Brief duration of intervention and lapses in program intensity
- Challenges to patient flow and stigma when patients are referred from one site to another (particularly in the context of post-abortion care)
- Inherited practices and attitudes (such as underestimating postpartum fertility) difficult to change

ANALYSIS OF SERVICES BY TYPE OF MNCHN SERVICES INTEGRATED WITH FP

Antenatal Care and Family Planning Services

Studies	10 peer-reviewed studies (1 study was reported by 6 separate articles)	
Locations	1 in Chile 1 in Honduras 2 in Bangladesh 1 in Pakistan	1 in Nepal 1 in India 1 in Kenya 1 in Cambodia 1 in the USA
Interventions	• All interventions integrated some form of antenatal care services with family planning education and counseling including comprehensive integration with other FP/MNCHN components, particularly postnatal care and infant/child growth. • Contraceptives were provided in 4 out of 10 studies. • Two studies included men (partners/spouses of pregnant women) as part of their target population. • Four studies were conducted in clinics, four were carried out as community-based interventions, and two studies had both clinic and community sites as their point of intervention. • Six studies simultaneously integrated FP and MNCHN services as part of the intervention; two studies added FP into their existing MNCHN services; one study strengthened existing FP-MNCHN services by adding an additional MNCHN component; and one study incorporated both an integrated FP/MNCHN service and compared it to an intervention that added FP into its existing MNCHN services.	
Study Designs	1 randomized controlled trial 2 non-randomized trials 1 before-after 4 serial cross-sectional	1 cross-sectional 1 multiple evaluations (2 cross-sectional and 4 serial cross-sectional)
Reported Outcomes	Health outcomes: Maternal morbidity and mortality, infant morbidity and mortality, pregnancy, unplanned pregnancy, infant/child growth Behavioral outcomes: Contraceptive use (acceptance, uptake, and discontinuation), pre- and post-abortion contraception, antenatal care use, and breastfeeding Process data/outcomes: Vaccination coverage, coverage and uptake of FP or MNCHN services, quality of services, cost/cost-effectiveness	
Findings	• The rigor score of these 10 studies was generally low. Out of a possible score of 9, nine studies had scores of 4 or less and only one study had a score of 7. • One study reported on infant mortality and found a positive effect in which infant mortality rates in one group of women who received FP education and counseling from community-based health workers were lower (5.2%) compared to the group of women who did not receive the intervention (7.2%; significance not reported). • Looking at the compiled Matlab studies however, four studies reported mixed effects on infant and maternal mortality. Of the two studies that reported maternal mortality, one found a positive effect where the total number of direct obstetric deaths was much lower in the treatment group compared to the comparison group, though significance was not reported. In one study, the authors did not report significant results for direct obstetric mortality between groups (RR=1.00 [0.96-1.05], p=0.93). In terms of infant mortality, two studies reported mixed results. One study showed an overall sustained decrease in perinatal mortality from 1979 (8.2% for both treatment and control groups) to1986 (treatment group = 6.6%; control group = 6.8%), where significance were not reported. It should be noted that actual number of live births remained roughly the same in both treatment and comparison groups. • Two studies reported morbidity and found a positive effect. One study reported significant results for infant morbidity rates between control and intervention groups (diarrhea: unadjusted RR = 11.3, p<0.001; hospitalization: unadjusted RR = 3.3, p=0.02). One study reported a sustained decrease over a 3-year period (2002: 9.4% vs. 2005: 1.3%, significance not reported) in complications during intervention after safer abortion was introduced at a clinic that offered ANC, FP, and STI screening.	

	• One study reported attended safe deliveries and reported a positive effect, as measured by admissions to Matlab maternity clinics (as proportion of live births). Specifically, 65% of admissions were from the treatment area compared to 33% from the comparison area (RR = 2.31, SIG, no p-value reported). • Out of four studies reporting pregnancy, two found no effect, one found a mixed effect, and one found a positive effect, where mean number of children born to women in the intervention group was consistently lower than women in the control group, across age groups. • Eight studies reported contraceptive uptake: four found a positive effect; four found mixed effects. • Three studies reported cost and all found a positive effect. Though the initial costs were higher in the integrated service interventions, two studies documented greater cost-effectiveness in terms of births averted in the intervention group arm (for one it was a fixed-site integrated service delivery package) when compared to groups receiving no intervention or a less-intensive integrated delivery package. • Seven studies reported uptake of MNCHN or FP services; one found a mixed effect and six found a positive effect. • Seven studies reported change in quality of services; five found a positive effect, one found a mixed effect, and one found no effect. • No studies reported unmet FP need, coverage of MNCHN or FP services, or stigma. A number of promoting factors behind the success of these integrated services include: availability of preferred contraceptive method of choice, autonomy in contraceptive choices, quality of care (cleanliness, confidentiality, client-centered), on-site integrated services, motivated providers and staff, monitoring indicators to measure change, and excellent referral systems. • A few inhibiting factors were also reported, specifically: incompatible services offered by providers with the expansion of services, significant investment of providers' time, high commitment demand from clients, difficulty finding adequate technical staff, and competing sources of contraception dispensers (medical stores, pharmacies).

Case Study: Bangladesh Provides Innovative Ways to Deliver FP/MNCH Services to Women

For over two decades, Bangladesh had implemented a door-to-door MCH-FP service delivery package to married women of reproductive age, which included bimonthly home-visits by female fieldworkers distributing contraceptives and information on MCH-FP counseling. Although the program has been successful in improving contraceptive prevalence rates and immunization coverage, among other things, increasing resource constraints required the exploration of alternative strategies. This non-randomized trial evaluated two different point-of-service delivery packages compared to standard care. In strategy 1, community-based sites (schools and clubs) became the central point for female fieldworkers to dispense contraceptive commodities and MCH-FP counseling to women once a week. In strategy 2, services were provided at a fixed-site (primary health care clinic), and included FP, ANC, postnatal care, and sick child and mother care. This enhanced service delivery package was carried out by three clinic staff daily, plus a doctor 3 days a week. As a way to motivate non-users, both interventions (community- and fixed-site) also conducted home visits. The control group consisted of national standard services offered door-to-door, and women who desired FP were referred to clinical services. Contraceptive use increased slightly in both community- and fixed-sites but remained the same in the door-to-door delivery group. Average daily attendance at fixed-site clinics improved with the greatest increase at the primary health care clinic. However, it was not determined if any of these increases were statistically significant. The fixed-site strategy was more cost-effective than the other strategies, as measured by costs associated with number of births averted and QALYs gained. Costs of services were much lower in the fixed-site strategy than those in the other two strategies. Quality-wise, clinics provided a more holistic approach to addressing

clients' needs in comparison to the community-based sites and door-to-door delivery method. However, alternative sources of contraceptives (e.g., pharmacies and shops) proved to be a deterrent for women in attending community-based sites. The authors concluded that replacement of the doorstep distribution strategy with the clinic-based strategy is feasible and cost-effective in urban areas without compromising the MCH-FP program performance.

Post-Abortion Care and Family Planning Services

Studies	10 peer-reviewed studies	
Locations	1 in Italy 1 in Russia 1 in Mexico 1 in China 1 in Cambodia	2 in Zimbabwe 1 in Kenya 1 in Ghana 1 in Senegal
Interventions	• All interventions integrated some form of family planning counseling and education to women receiving post-abortion care and took place at health care delivery points such as hospitals and clinics. • FP services were provided in a variety of forms, including pre- and post-abortion individual and group counseling sessions, contraceptive service provision, and referrals for further FP education and/or commodities. Other components of the interventions included manual vacuum aspiration (MVA) training for providers, pain management for post-abortion care, comprehensive reproductive health care, STI prevention and management, male involvement in counseling, patient-centered care, media campaigns, supervision of clinic staff, and quality control in clinics. • Only one intervention included additional MNCHN services other than post-abortion care.	
Study Designs	2 randomized controlled trials 2 non-randomized trials 1 before-after	1 case-control 3 serial cross-sectional 1 cross-sectional with control group
Reported Outcomes	Health outcomes: Morbidity, unplanned pregnancy, abortion, infant/child growth Behavioral outcomes: Condom use, contraceptive uptake Process outcomes: Unmet FP need, uptake of MNCHN or FP services, quality of services, cost/cost-effectiveness	
Findings	• The rigor of the included studies was generally quite low. Out of a possible 9 points, seven of the 10 studies had a rigor score of 1 or 2; two had a score of 5; and one had a score of 7. Only two of the studies used a randomized controlled trial design. • Integrated services consistently resulted in increased uptake of contraceptive methods, with the exception of two studies which found mixed effects. • The three studies that measured effects of the interventions on unplanned pregnancies or abortions found mixed results. • Integrated services resulted in improved quality of care among five of six studies which measured it. • The only study reporting cost found that the intervention resulted in a decreased cost per visit after the intervention (6,500 CFA Francs) compared to before the intervention (10,000 CFA Francs). • Four studies reported a positive effect on uptake of services. • No studies reported mortality, breastfeeding, vaccinations, attended or safe deliveries, coverage of MNCHN or FP services, or stigma. • A number of factors that promoted the success of integrated services were mentioned, including free provision of contraceptives, patient-centered model of care, culturally appropriate services, onsite availability of FP services, timing of FP services (before and immediately after abortion), male involvement, and availability of resources and equipment and provider training.	

	• A number of inhibiting factors were mentioned as well, including staffing problems (high turnover, high workload, lack of supervision and continuing education, and stigma toward women perceived to have had an abortion); high cost of services to both clients and clinics; cost and logistics of contraceptive commodities; and limited client follow-up to sustain contraceptive use.

Case study: China's Successful Attempt at Integrating Family Planning into Post-abortion Care Clinics

For women in China, especially young unmarried women, the one-child family policy means that induced abortion is the only answer for most unplanned pregnancies. Because family planning is offered at a parallel system of FP clinics, the concept of providing FP services within the national network of abortion clinics was a new one. This study used a cluster-randomized trial design among 24 clinics in three cities to evaluate an essential package (A) compared to a comprehensive package (B) of post-abortion FP services. The essential package included a one-day training for abortion service providers and the provision of service guidelines, group education for women who sought an abortion, and referral to FP services. The comprehensive package included services offered in Package A, along with an extra day of training for providers, individual counseling, information and recommendations about suitable FP methods, free contraceptive provision, and involvement of male partners. Both packages resulted in increased use of contraceptives over the 6-month follow-up, but package B had a stronger effect on increasing use of effective contraceptive methods and consistent and correct use of condoms. Rates of pregnancies, unwanted pregnancies and induced abortion at 6-month follow-up were higher for package A clinics than package B clinics, for both the before intervention and after intervention cohorts, but these differences were not statistically significant. During implementation of the intervention, providers were hindered from receiving FP training and providing quality individual FP counseling because of their busy schedules. Also, in some hospitals, men were not allowed into the gynecology departments or counseling rooms and were only provided basic informational material, prohibiting full implementation of the Package B intervention. Despite the challenges, integration of FP services into post-abortion care in China was feasible and effective, but research on the long-term effect is needed.

Intrapartum/Childbirth Services and Family Planning Services

Studies	3 peer-reviewed studies (1 study was reported by 6 separate articles)	
Locations	1 in Honduras	1 in Bangladesh 1 in India
Interventions	• All three interventions integrated several MNCHN interventions, including intrapartum and childbirth services, with FP education, counseling, and service provision. • The INOPAL study was a client-oriented reproductive health program in Honduras that integrated FP services into prenatal, delivery and postnatal hospital services. The package of services included prenatal education, individual counseling on FP and reproductive health, a variety of contraceptive commodities, a postpartum outpatient clinic for mothers and newborns, and a perinatal information system for improved data collection. • The MCH-FP project was a community-based reproductive health program in the Matlab district of Bangladesh that was evaluated over many years. Initially, the program offered basic MCH services, including distribution of safe delivery kits and FP, through household outreach. In 1996, four health centers were established to provide basic emergency obstetric care. • The India Local Initiatives Program sought to fill in the gaps in government services using community health workers to bring health and FP information, antenatal and postnatal care, and immunization services to the community.	
Study Designs	2 serial cross-sectional	1 multiple evaluations, all cross-sectional or serial cross-sectional
Reported	Health outcomes: Mortality, infant/child growth	

Outcomes	Behavioral outcomes: Contraceptive uptake Process outcomes: Attended or safe deliveries, vaccination coverage, uptake of MNCHN or FP services, quality of services, cost/cost-effectiveness
Findings	• The INOPAL study showed improvement in all three reported key outcomes. Acceptance of modern contraceptives increased from 9% to 46% over a period of two years. Uptake of MNCHN and FP services improved, as the number of women attending FP and reproductive health counseling services increased from 33 to 296 within less than a year, largely due to an increase in the number of women attending 40 days postpartum or later. The quality of services (as measured by proportion of women reporting having received certain services such as FP information and methods) improved as well; for example the number of women who received information about how their chosen method of contraception worked went from 53% to 84% over 10 months. No outcomes directly related to intrapartum care, such as obstetric/infant mortality or attended/safe deliveries, were reported. • Results from the Matlab study showed higher contraceptive prevalence rates over time for the intervention area (which improved from 3.0 to 44.1 over 10 years) compared to the control area (from 3.0 to 11.6 over 10 years), though the statistical significance of this finding was not reported. The intervention area had a higher proportion of attended or safe deliveries (65%) compared to the control area (33%, $p<0.05$). The Matlab intervention was also found to prevent more births and be more cost-effective than the control area (average cost per birth averted was $171 for the Matlab intervention compared to the control area in one model; statistical significance was not reported). However, results were mixed for mortality and infant/child growth. • The India Local Initiatives Program demonstrated drastic improvements in behavioral change in one of the three study areas. Three years into the study, as contraceptive use increased to 66% overall, the use of pills and condoms nearly doubled, whereas sterilization (male and female) nearly tripled. The other two study areas demonstrated internal improvement from baseline to the mid-term evaluation period but not when compared to national statistics. • None of the studies reported on morbidity, pregnancy, abortion, condom use, breastfeeding, unmet FP need, coverage of MNCHN or FP services, or stigma. • Several factors were mentioned that promoted the success of the integrated services, including strong internal communication among staff, commitment of volunteers, flexibility to change services to better meet client needs, strong oversight, monitoring progress, ability for community health workers to identify and refer pregnant women with complications, and the cost-effective delivery of more services. • Several inhibiting factors were also mentioned, including adequate staffing, operational challenges in coordinating mother/baby visits, the high cost of implementation, time-consuming data collection, possible lack of sustainability, and the need for well-functioning higher levels of the health care system for successful community-level interventions.

Case Study: Bangladesh Implements Integrated MCH and FP Services, Including Safe Deliveries and Referral for Complications During Delivery

Beginning in 1977, Bangladesh implemented a family planning program within Matlab district. MCH services were added in the 1980s, and the program came to be known as the Maternal Child Health Family Planning (MCH-FP) project. The program consisted of FP services, tetanus immunization during pregnancy (and later for all married women), iron/folic acid supplementation during pregnancy and lactation, distribution of safe delivery kits, and care of simple ailments during pregnancy. In each village within Matlab district, a female community health worker visited each household biweekly and then monthly with a male health assistant. In 1996, four health centers were established to provide basic emergency obstetric care for the catchment area and were staffed by a trained nurse-midwife and a paramedic who provided antenatal care, treatment of minor pregnancy and delivery complications, conducted normal deliveries, and referred serious cases to a hospital. Although some mortality

evaluation data did not show an effect of the intervention, there appeared to be a sustained decrease in perinatal mortality and direct obstetric deaths in Matlab district compared to the comparison area. Furthermore, children under the age of 5 living in Matlab district were healthier (measured by height-for-age) than children living in the comparison area, although this difference was statistically significant for girls and not boys. Contraceptive prevalence rates showed greater improvement over 10 years time in Matlab district (from 3.0 to 44.1) compared to the control area (3.0 to 11.6), though statistical significance was not reported. The MCH-FP intervention was more cost-effective than the control area, measured by cost per birth averted, though average cost was higher in the former. A key factor that helped decrease mortality was the health care workers' ability to identify and refer serious cases. In addition, the intervention delivered approximately three times more services per eligible woman than in the comparison area at the same cost per woman. The contribution of the community-level intervention to reducing maternal mortality depended on the functioning of higher levels of the health system. However, mortality dropped over time in both the intervention and comparison areas, most likely due to spillover and provision of government and NGO services in the comparison area. Although no difference in maternal mortality was found, there have been lower rates of fertility in the Matlab area as a result of 20 years of FP services.

Postnatal Care and Family Planning Services

Studies	11 peer-reviewed studies	
Locations	1 in Chile 1 in Honduras 2 in Nepal 1 in Bangladesh 1 in India	1 in Syria 1 in Kenya 1 in Niger 1 in the USA 1 in Australia
Interventions	• In general interventions in this row consisted of three types: 1) home visits with new mothers and their infants to provide post-natal care and education, including FP education and/or provision (n=7); 2) re-training of healthcare workers to offer both post-natal care and FP in their clinics and hospital settings (n=3); and 3) education about FP given to new mothers (n=1). • Seven out of 11 studies included contraceptive commodity provision. • Nine studies simultaneously integrated MNCHN and FP services integration, while two studies added FP to existing MNCHN services. • Studies in this group provided very comprehensive services with all but one study providing services integrated with multiple types of MNCHN services from different rows in the matrix.	
Study Designs	4 randomized controlled trials 3 non-randomized trials	5 serial cross-sectional
Reported Outcomes	<u>Health outcomes:</u> Maternal morbidity and mortality, infant morbidity and mortality, repeat and unintended pregnancy, infant/child growth <u>Behavioral outcomes:</u> Contraceptive uptake and use, breastfeeding <u>Process data/outcomes:</u> Uptake of FP or MNCHN services, quality of care of services, cost or cost-effectiveness, vaccination coverage	
Findings	• The rigor of the included studies was generally quite good, and included four randomized control trials. Out of a possible 9 points, the average rigor score for this group of studies was 3.6. Four out of 11 studies had rigor scores five or higher; the remaining seven studies had rigor scores lower than five, including four studies with the lowest possible score of one. • Eight out of 11 studies were conducted in resource-limited settings. • Two studies reported on mortality and found no effect of the intervention on infant mortality. Three out of 4 studies that reported on morbidity found positive effects, such as	

11 times lower diarrhea for infants in the intervention group 80% lower adverse neonatal outcomes in the intervention group and QALYs gained highest in the intervention group and only one study reporting no effect.

- Of the four studies that reported on pregnancy outcomes, three studies found no effect and one study found the number of births averted was highest in the control group post-intervention. Two studies reported on infant growth with one finding that infant weight was 10,093g in the intervention group compared to 918g in the control group while the other study found no effect of the intervention. Of the four studies that reported on breastfeeding, 3 found no effect and one found that 74% of the intervention group was still fully breastfeeding at 6 months postpartum compared to 10% of the control group.
- All 11 of the included studies reported on contraceptive use; 4 studies found no effect of the intervention while 5 studies found positive results. These included one study that found obtaining contraceptives from a pharmacy increased in the intervention group from 5.4% to 7.0% while decreasing in the control group. Another study found that those in the intervention group were 1.33 times more likely to use reliable contraception at 6 months postpartum, and two studies found contraceptive acceptance increased from 35% to 63% and from 9.2% to 46% over two years.
- Integrated services resulted in improved quality of care in six of eight studies that measured it, and no effect in the other two studies.
- Only two studies reported on cost. One study found that a clinic-based strategy (PHCC) was more cost-effective than either a community-based strategy or a control group. The cost per birth averted post-intervention was US$585 in the PHCC group compared to US$830 in the control group and the cost per QALY gained was US$491-787 in the PHCC group compared to US$1,170-1,877 in the control group. The other study found that the average cost per service declined from US$4.12 to US$2.54 over three years of integrated services.
- None of the studies in this group reported on STI incidence, unmet FP need, attended or safe deliveries, or on stigma.
- Factors promoting integration included informed free choice, coordination of care and increased communication among providers, high staff retention, commitment of volunteers, oversight, monitoring of indicators over time, clients' perceptions that services were valuable, and increased cost-effectiveness.
- Factors inhibiting integration included significant investment in provider time, high levels of coordination required between providers, high demand from clients, need for improved infrastructure to coordinate care and maintain patient records, challenges in changing inherited cultural practices and attitudes, intervention success being dependent on the quality of midwives available for care, possible lack of sustainability and low levels of pre-intervention quality of care.
- The most common intervention type – home visits – is highlighted in the case study below.

Case study: Evaluating the impact of postnatal health education for mothers on infant care using a combined clinic and home visitation approach in Nepal

A randomized control study design was used to evaluate the impact of a one-on-one postnatal education program offered to new mothers attending a maternity hospital in Kathmandu, Nepal with follow-up conducted in the mothers' homes. There were three intervention groups and one control group: the first group received health education at birth and at 3 months follow-up, the second group received health education at birth only, and the third group received health education at 3 months only; the control group did not receive any additional health education. Intervention groups received at least one of two interactive education sessions, conducted by a trained female health educator, midwife or community health worker. These interactive and supportive 20-minute sessions covered exclusive breast feeding, the need for FP, treatment of diarrhea, symptoms of acute respiratory infection in infants, and immunizations. The study found primarily mixed results. Health education given after

delivery and three months later did not improve mothers' knowledge and practices of infant health outcomes. Mothers who received health education at birth were slightly more likely to use contraception at six months after birth compared to mothers who received no health education at birth; however, contraceptive use remained low (< 38%) in all four groups. There were also no significant differences between groups for outcomes of infant feeding, care, or immunization. Authors reported that the short length and frequency of the intervention may have influenced results unfavorably; however, the intervention was designed to make this intervention more practical and sustainable over the long term. They recommend frequently repeated simple messages, suggesting that such interventions in developing countries will need to evaluate the trade-off between efficacy and costs. They also recommended that interventions should take into consideration women's broader context; the extent of their influence in household decision making; childbearing, household, and work responsibilities; and work in the fields—all of which may significantly influence their health care seeking behaviors. Finally, study authors advocated evaluating a combination of antenatal and perinatal education sessions with mothers.

Infant/Child Services and Family Planning Services

Studies	16 peer-reviewed studies	
Locations	1 in Chile 1 in Honduras 1 in Syria 1 in Kenya 1 in Niger 1 in Ghana 1 in Togo	3 in Pakistan 2 in Bangladesh 1 in India 1 in Nepal 1 in USA 1 in Australia
Interventions	• All interventions integrated some form of infant/child care services (e.g. treatment of childhood illnesses, basic preventive care, immunizations) with family planning education and counseling. • Some interventions also offered antenatal and postpartum care, nutrition counseling, emotional support and counseling for new mothers on caring for themselves and their children, and education about early child development. • Nine studies included provision of non-clinical contraceptive methods. • Most studies emphasized training for providers (e.g., physicians, nurses, community health workers, nurse midwives, health educators). • Two studies included specific efforts to engage with community members and important stakeholders to mobilize community support for improving family planning and overall community health. • Ten studies were conducted in clinic settings; four of these included home visits by trained staff to encourage contraceptive continuation. • Six studies were conducted exclusively in homes by community health workers/nurse midwives delivering a broad range of services from treating minor childhood illnesses, growth monitoring, encouraging breastfeeding and contraceptive use, health promotion, antenatal and postnatal care, and providing non-clinical contraceptive methods. • Nine of the interventions simultaneously integrated MNCHN and FP services; five studies added FP services to existing MNCHN services; and two studies used dual strategies of delivering MNCHN and FP services, including both simultaneous provision of MNCHN and FP services and adding FP services to existing MNCHN services.	
Study Designs	5 randomized controlled trials 3 non-randomized trials	5 serial cross-sectional 3 cross-sectional
Reported Outcomes	Health outcomes: Mortality, morbidity, pregnancy, infant/child growth Behavioral outcomes: Condom use, contraceptive uptake, breastfeeding Process outcomes: Vaccinations, attended or safe deliveries, uptake of MNCHN or FP services,	

	coverage of MNCHN or FP services, quality of services, cost/cost-effectiveness
Findings	• The rigor of the included studies was mixed. Out of a score of 9 points, six studies had a low score of 1-3; eight studies had a medium rigor score of 4-6; and two studies had a high score of 7 or above. • Eleven out of the 14 studies that measured intervention effects on contraceptive use reported positive results and reported an increase in contraceptive utilization among intervention groups as compared to control groups or post-intervention compared to pre-intervention, although this difference was not always statistically significant. Among the remaining three studies, two reported no effects and one had mixed results. • Integrated services resulted in fewer pregnancies or repeat births among three of the four studies that measured it. • Among the four studies that measured breastfeeding duration, two reported positive results, and two reported no effect. • Three studies measured indicators of infant growth, and two among these reported positive results of integrated services on infant growth. • Two studies reported cost. One study found that one intervention arm—a fixed public health clinic—was most cost-effective, resulting in a lower cost per birth averted (585 Taka per birth averted; 1USD=45 Taka) as compared to other intervention (1761 Taka) and control (830 Taka) arms. The other study found that the average cost per service declined from US$4.12 to US$2.54 over three years of integrated services. • Three studies reported a positive effect on uptake of services. One study reported a greater number of infant visits first –year postpartum in the intervention group (mean = 7.5) compared to the control group (mean = 5.3); this positive effect was also recorded at both 6-month (93% vs. 88%) and 12-month (92% vs. 72%) infant follow-up sessions. • Five of seven studies that reported on quality of care found that quality improved as a result of the intervention. Quality was measured in various ways. For example, in one study the number of women who received information about how their chosen method of contraception worked went from 53% to 84% over 10 months. • No studies reported abortion, unmet FP need, or stigma as outcomes. • A number of factors promoting the success of integrated services were reported, including coordination and communication between different services providers, linkages with the community, male involvement, high staff retention, provider training, community-based distribution of services, home visits by providers, patient-centered model of care, simple health education and referral messages, provision of integrated services at a single location, and availability of resources, equipment and provider training. • A number of factors inhibiting the success of integrated services were also mentioned. These include political instability, funding shortages, complex intervention designs requiring high commitment from clients, barriers to accessing care, cultural norms regarding gender, childbearing and fertility, poor quality provider training, lack of coordination among providers, hostility among providers to change their practices, and costs and logistics. • Overall, most of these studies provided comprehensive MNCHN and FP services to clients and emphasized provider training, while a few additionally attempted to address cultural norms and barriers to increase use of FP services through community and stakeholder involvement. Moreover, most of these efforts influenced contraceptive uptake and unintended pregnancy rates favorably.

Case Study: Evaluation of Two Distinct Community-based Approaches to MCH-FP delivery – The Navrongo Project in Ghana

The Navrongo Community Health and Family Planning project, a high quality randomized controlled trial, was conducted in 1994 in the Navrongo Region of northern Ghana. This project employed two distinct community-based approaches to the delivery of FP and basic primary care in addition to

standard Ministry of Health clinic-based services. The intervention had four arms. (1) Nurse outreach: Community health nurses were trained to offer doorstep services including treatment of childhood illnesses, immunizations, and provision of non-clinical FP methods (oral contraceptives, condoms and injectables). (2) Zurugelu: Traditional social cooperation ("zurugelu") was used to mobilize support for community health and FP services. Health-care action committees were formed with councils of village elders, mobilizing traditional peer networks. Community health volunteers provided basic health care, reproductive health education, outreach to men, and non-clinical contraceptives. (3) A combined nurse outreach and zurugelu approach. (4) A control arm consisting of the existing clinic-based MOH services. Both delivery approaches (study arms 1 and 2) had positive effects, while the combined approach (arm 3) was more effective across select outcomes. The unadjusted fertility decreased in all three intervention arms. Both the nurse outreach and the zurugelu intervention significantly reduced parity progression relative to the comparison area in every year. The combined approach was greater than each approach separately, demonstrating that each arm has an additive effect on fertility reduction. Moreover, the combined approach was associated with consistently higher levels of modern contraceptive use for the first three years, but there was no apparent effect in the fourth year and no effect if the two approaches were implemented independently. The overall contraceptive prevalence, however, was still quite low at the end of four years of study exposure suggesting that factors external to the intervention were affecting fertility. In terms of intervention effects on child mortality, the results varied by study arm. The nurse outreach approach resulted in a decrease in under-five, early child, and infant mortality, while both the zurugelu and combined approach resulted in an increase in child mortality in all age groups. Authors felt the presence of outreach workers in the zurugelu and combined approach may have diverted health-seeking behavior away from skilled medical care available in sub-district clinics. This could have been particularly unfavorable for two health conditions, acute respiratory infections and diarrheal disease, common in the second year of life. Mobilization of MOH resources to provide services within the community ensured greater access to FP. Additionally, by engaging with community leaders, including men, the zurugelu approach directly responded to cultural barriers that women face in accessing and utilizing modern contraception. Minor and temporary lapses in project intensity may have influenced the widespread discontinuation of contraceptive methods. The authors conclude that a comprehensive community-mobilization approach to the provision of FP services can have a favorable impact even in a traditional setting that is widely viewed as being incompatible with FP program success.

Maternal and Infant Nutrition and Family Planning Services

Studies	5 peer-reviewed studies (1 study was reported by 6 separate articles)	
Locations	1 in Chile 1 in Honduras	1 in Nepal 2 in Bangladesh
Interventions	• All interventions integrated some form of maternal or neonatal/infant child care service, with services to specifically improve neonatal/infant or maternal nutritional status, with family planning education and counseling. The services offered included encouragement of breastfeeding, infant vaccinations, immunizations, and other basic preventative care. • Two studies included provision of non-clinical contraceptive methods. • Two studies were conducted exclusively in clinic settings. • The remaining three studies included home visits and a clinic component. In these three studies, trained community health workers visited women in their homes offering services such as basic prenatal care, immunizations, iron/folic acid nutritional supplementation, distributing safe delivery kits, encouraging breastfeeding and family planning, and providing non-clinical contraceptive methods. In addition, in one study (six peer-reviewed articles report on this study) health centers were established to offer emergency obstetric care, treat minor pregnancy and delivery complications, conduct normal deliveries, and refer cases with serious complications to the hospital. In another study, health education emphasizing breastfeeding was offered at the maternity clinic before discharge, while in the	

	third study after home visits women were encouraged to visit health centers for all essential reproductive, maternal, and child health care needs, nutritional services, and basic curative and preventive care. • All five intervention studies simultaneously integrated MNCHN and FP services.	
Study Designs	1 randomized controlled trial 2 non-randomized trials	1 serial cross-sectional study 1 multiple evaluations (2 cross-sectional and 4 serial cross-sectional)
Reported Outcomes	Health outcomes: Mortality, morbidity, pregnancy, infant/child growth Behavioral outcomes: Contraceptive uptake, breastfeeding Process outcomes: Vaccination coverage, attended or safe deliveries, uptake and coverage of MNCHN or FP services, quality of services, cost/cost-effectiveness	
Findings	• The rigor score of these included studies was generally low. Out of a possible score of 9, three studies had a low score of 1-3, and two studies had a medium score of 4-6. • All five studies measured contraceptive use with three studies reporting positive results due to the intervention, one study reported no effect and one study reporting mixed effects with contraceptive use increasing over time in both the intervention and control groups. For the three studies that reported positive outcomes, one study found that contraceptive use increased from 28% to 53% in the intervention group, another study found contraceptive use was 35% in the primary intervention group compared to 27% in the control group, and in the other study contraceptive use increased from 9.2% to 46% over two years. • For breastfeeding, one study found no effects of the intervention and the other study found positive results with 74% of the intervention group still fully breastfeeding at six months postpartum compared to 10% of the control group. • Two of three studies measuring infant growth reported no effect of the intervention on infant growth (height and weight for age) while one study reported positive effects, finding that infant weight was 10,093g in the intervention group compared to 918g in the control group. • Among the three studies that measured the effects of integrated services on infant mortality, one reported a significant difference between the intervention and control arms with mortality rates being significantly lower in the intervention arms; while the other two studies found no effect. • Two peer-reviewed articles reporting on the same study measured the effects of integrated services on maternal mortality, but only one of these found results and reported a significant reduction in maternal mortality rates coupled with significantly higher utilization of maternity clinics for assisted delivery in the intervention arm as compared to the control arm. • One study reported on cost and showed that the average cost per birth averted in the intervention group was lower and ranged from US$171-240 compared to US$220-298 in the control group. • No studies reported on abortion, condom use, unmet FP need, or stigma. • A number of factors promoting the success of integrated services were reported, including coordination and communication between different service providers, linkages with the community, community-based distribution of services, patient-centered model of care, reduction in costs to clients, and availability of resources, equipment, and provider training. • A number of factors inhibiting the success of integrated services were also mentioned. These include training programs that were time intensive and hence limited provider participation, short duration of interventions, provider unwillingness to change practices and coordinate amongst each other, infrastructural costs and challenges, lack of an efficient referral system, as well as inefficiencies at higher health system levels.	

Case Study: A Clinic in Chile Has Mixed Results Implementing Comprehensive Services, Including Breastfeeding and Maternal and Infant Nutrition

Consultorio San Luis de Huechuraba (CSLH), a non-government clinic in a poor neighborhood in Santiago, provided integrated FP and maternal and infant care. The intervention had been proven efficacious elsewhere, so the objective of CSLH was to evaluate it in an area of extreme poverty. All four providers were trained in breastfeeding and contraceptive management and worked as a team to provide care to mothers and infants. Two were community health workers who conducted home visits during pregnancy and visits to the maternity wards. They were trained in pregnancy care, FP, prevention of STDs/HIV, breastfeeding, infant care, and maternal and infant nutrition. Mothers and infants were seen during the same visits every 10 days in the first month postpartum and at monthly intervals thereafter for the first year. The intervention was evaluated by comparing it to a public clinic in a similar neighborhood nearby. Outcomes of the evaluation were mixed, with no effect on contraceptive uptake and unintended pregnancies, and positive results for breastfeeding, infant growth, and uptake and quality of services. Contraceptive acceptance was similar among clients attending both clinics, but methods chosen differed, as did contraceptive discontinuation. Number of unintended pregnancies was higher among the CSLH clinic clients, although this difference was not statistically significant. Breastfeeding rates and infant growth were significantly better among women attending CSLH compared to women at the control clinic, and infant morbidity rates were lower. All method acceptors attended the CSLH until the end of the year, whereas 21% of those attending the public clinic were considered lost to follow-up. Clients at CSLH reported feeling supported in choosing from a variety of available contraceptives free of charge, and care among providers was coordinated. Although the intervention clients spent more time at CSLH because of the greater number of scheduled visits, they felt the time was well-spent, and they felt empowered in their choices. However, the intervention required significant investment in provider time and a high level of commitment from clients. The study authors concluded that this type of program could be built into the national program to improve maternal and child health outcomes.

GAPS IN THE RESEARCH

- Few studies specifically compared integrated MNCHN and FP services to the same services offered separately.
- Few studies examined family planning services integrated with maternal and infant nutrition services.
- All studies targeted women; only three studies also targeted men even though men in most resource-limited and traditional settings have an influence on fertility decisions and actions. Four studies explicitly recommended greater involvement of men, indentifying the lack of male involvement as a limiting factor in study success.
- Few studies reported on cost data and only one study measured cost-effectiveness, despite the fact that cost-effectiveness remains a key argument in favor of integration. Furthermore, only one study measured coverage of services as an outcome.

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