

Integrating Maternal, Neonatal, and Child Health and Nutrition and Family Planning: A Systematic Literature Review

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Abstract

The Global Health Initiative emphasizes integrating health programs, but there is limited evidence guiding the integration of maternal, neonatal and child health and nutrition (MNCHN) services with family planning (FP) services. We conducted a systematic review to examine the evidence base for integrating MNCHN and FP services. Cochrane methods were used to search and screen the literature. Inclusion criteria were: 1) peer-reviewed publication through April 2010; 2) pre-post or multi-arm study design; 3) organizational strategy aimed at integrating MNCHN and FP service delivery. Rigor scores were assigned using a 9-point scale. 29 interventions met the inclusion criteria; 7 were randomized trials. The average rigor score was 3.2 out of 9. There was heterogeneity in study objectives and designs, types of interventions, locations, and outcomes. Overall, integration was found to be feasible with many positive outcomes, although many studies reported mixed or no effect on some outcomes. When measured, most studies found an increase in uptake of services, improvement in quality of care, and cost-effectiveness with integrated compared to non-integrated services. Factors promoting successful integration included effective provider training and supervision, providing a large selection of contraceptives, client-centered counseling, involvement of men and traditional health workers, and availability of a clinic with high-quality services. Gaps in the literature include nutrition services integrated with FP, interventions targeting men or couples, and studies measuring long-term effects. Program managers and policy makers should consider integrating MNCHN and FP services when feasible, although more research is needed.

Outcomes reported in the included studies

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.

Findings for key categories of outcomes

Based on the table below, the outcomes of all included studies were assessed to determine if the body of evidence supports an integrated approach to offering MNCHN and FP services.

Coverage: Of the four studies that reported vaccination coverage as an outcome, only one demonstrated an improvement in vaccination coverage as a result of the integrated intervention. The remaining three interventions had either mixed or no effect on vaccination coverage. One of these four studies also reported a different coverage outcome (availability of a private doctor or a government health center), and it found an increase in coverage. No studies reported that coverage decreased as a result of the intervention.

Quality of care: A total of 15 studies reported on quality of care as an outcome. Quality was measured using a variety of methods, such as client satisfaction measures, quality index scores, and proportion of clients receiving certain types of support and information. Eleven of the 15 studies reporting quality outcomes found that the integration intervention improved quality, while the remaining four studies found either mixed or no effect on quality. No studies reported that quality decreased as a result of the intervention.

Use of MNCHN and FP services: Twelve studies reported use of MNCHN and FP services. This category included use of antenatal care, post-abortion care and family planning services (though not necessarily use of a contraceptive method); infant follow-up visits; immunizations administered; and visits to clinics. All but one study found that use of MNCHN and FP services increased as a result of the integrated intervention; the remaining study found that use of MNCHN and FP services did not change. No studies reported that use of MNCHN and FP services decreased as a result of the intervention.

Cost and cost-effectiveness: Only four studies reported either absolute cost or cost-effectiveness, and all four studies demonstrated either a decrease in cost or an improvement in cost-effectiveness as a result of the intervention. Two studies found that cost per visit or per service decreased after an integrated intervention had been implemented. The other two studies also showed increased cost-effectiveness, although upfront costs were higher for the integration intervention.

Effectiveness: Measures of effectiveness included health and behavioral outcomes. The most commonly reported behavioral outcome was family planning use. Of 26 studies reporting this outcome, 19 found an increase in family planning use, whereas seven found mixed or no effect. The most commonly reported health outcome was subsequent pregnancy. Of ten studies reporting this outcome, four found a decrease in pregnancy as a result of the integrated intervention, whereas six found mixed or no effect. (Only four of the ten studies specifically measured unplanned pregnancies; two found a decrease and two found mixed or no effect). Results were similar for other health and behavioral outcomes, with some studies finding a positive effect and others finding mixed or no effect. No studies reported negative outcomes for any health or behavioral outcomes.

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
Family planning use	26	3.22	19	7
Breastfeeding	4	5.75	1	3
Process outcomes				
Unmet FP need	1	1.00	1	0
Attended or safe deliveries	1	2.67	1	0
Use of other FP or MNCHN services	12	2.22	11	1
Vaccination coverage	4	3.50	1	3
Coverage of other 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.