

What is the evidence for interventions to improve family planning use among women in the 12-month postpartum period in less developed countries?

Introduction

The World Health Organization recommends postpartum family planning as a critical component of health care that has the potential to meet women's desire for contraception, and save millions of maternal and infant lives in developing countries (1). This is because family planning can have tremendous impact on the health of women, children, and infants, particularly when offered to the many women with unmet need in the postpartum period. The question that this systematic review will aim to address is what evidence exists, if any, of the efficacy of family planning interventions that target women in the 12 months postpartum in less developed countries.

Background

The postpartum period is a risky time for women to become pregnant, as closely spaced pregnancies have potentially detrimental effects on maternal, infant, and child health. Postpartum family planning is defined as using a safe, effective method of contraception to limit or space births for 12 months after delivery (2). Though the global community has lagged behind in achieving the MDGs related to maternal mortality in resource-poor settings (3), current estimates indicate that contraceptive use has reduced maternal mortality by 40% and infant mortality by 28% globally in the last 20 years by allowing women to space and limit births, in addition to saving lives that would have been lost to high risk pregnancies and unsafe abortions (4). Postpartum family planning is critical for saving women and children's lives in the developing world. Moreover, a review of DHS data from 2010 demonstrated that most women in less developed countries would like to postpone pregnancy past their first year postpartum (5).

Despite the importance of this issue, and the notable progress that has been made in family planning, some countries continue to face challenges related to contraceptive care. The unmet need for family planning is high among women who recently delivered in the developing world (6)(7). In Africa, 65% of women in their first year postpartum would like to space or limit pregnancy but are not currently using contraception; only 5.4% of women reported wanting to have another child within 24 months of their last child's birth (8).

In this context we cannot understate the need to assess the efficacy of existing programs in less developed countries targeting postpartum family planning outcomes, and scale up those that show promise. The objective of this review is thus to identify programs that demonstrate promise on a range of postpartum family planning outcomes in less developed countries.

Methods

This review aims to retrieve studies that targeted the postpartum period for increased uptake of family planning within the 12 months after delivery in less developed countries. Our objective is to cast a wider net than previous analyses (9)(10) so as to review a broader base of evidence for promising programs that may be considered in low resource settings. Studies will be included if the intervention targeted women in less developed countries within one year postpartum, and measured family planning knowledge, use, or intention to use, or birth spacing outcomes. In order to capture a wider range of promising practices, the review will include studies of interventions without a comparison group, and intervention sites may include facility and community settings.

The authors searched the bibliographic databases PubMed, Web of Science, and Popline for grey and white literature using the following search terms: “postpartum,” “after delivery,” “postnatal,” “fertility regulation,” “family planning,” “contraception,” “birth spacing,” “child spacing,” “birth interval,” “birth intervals,” “pregnancy interval,” “pregnancy intervals,” “interpregnancy interval,” “interpregnancy intervals.” The results were limited to the last 10 years, from September 2004 – September 2014. Studies in the following languages were included: English, French, Italian, Portuguese, Spanish.

The identification, screening, eligibility, and review of studies will follow Cochrane’s PRISMA system (11). Both authors will screen abstracts followed by full texts, excluding studies according to the PICO system (12), as follows:

Table 1. Inclusion and exclusion criteria

| PICO hierarchy | Inclusion criteria | Exclusion criteria |
|------------------|---|---|
| Population | Less developed countries Women Intervening prior to 12 months postpartum | Developed countries Intervening with women who are not pregnant or in the 12 months after delivery |
| Intervention | Interventions targeting increasing family planning outcomes during the 12 months postpartum Community- or facility-based | Secondary data analysis |
| Comparison | Comparison group not necessary for inclusion | |
| Outcomes | Study must measure one or more postpartum family planning outcomes, including: (1) postpartum family planning use, (2) intention to use, (3) time to family planning initiation postpartum, (4) contraceptive prevalence at 3/6/9/12/18 months, (5) incidence of unintended pregnancy at 1/2 years postpartum, (6) knowledge of family planning, (7) use and/or knowledge by type of method | Study did not measure postpartum family planning outcomes |
| Types of studies | Randomized controlled trials, retrospective and prospective cohort studies, case series (uncontrolled longitudinal) studies, controlled pre-post intervention studies, interrupted time series, descriptive studies, case-control studies, randomized and non-randomized, quantitative, review literature, meta-analysis | Qualitative studies Descriptive studies without outcomes measurement |

All full texts reviewed will be hand-searched for relevant references. Each full text will be reviewed and data extracted pertaining to intervention name, location, time period, target population, size of intervention population, intervention description, types of contraceptives included, funder, outcomes measured, associations identified. The researchers will independently assess the strength of each study that meets all inclusion criteria using the U.S. Prevention Task Force guidance.

Results

The investigators are currently scanning abstracts based on inclusion and exclusion criteria. By October, we will complete abstract review and will independently grade full texts by November. The manuscript will be completed by December 15, 2014.

Our initial database search delivered 1,615 results. We will categorize the studies that meet our inclusion criteria by outcome assessed, type of study, direction of effect, and significance of the outcomes measured. We will then assess whether there is sufficient evidence to draw a conclusion about the effect of each category. The following figures and tables will be completed during analysis:

Figure 1. Literature identification, screening, and review process

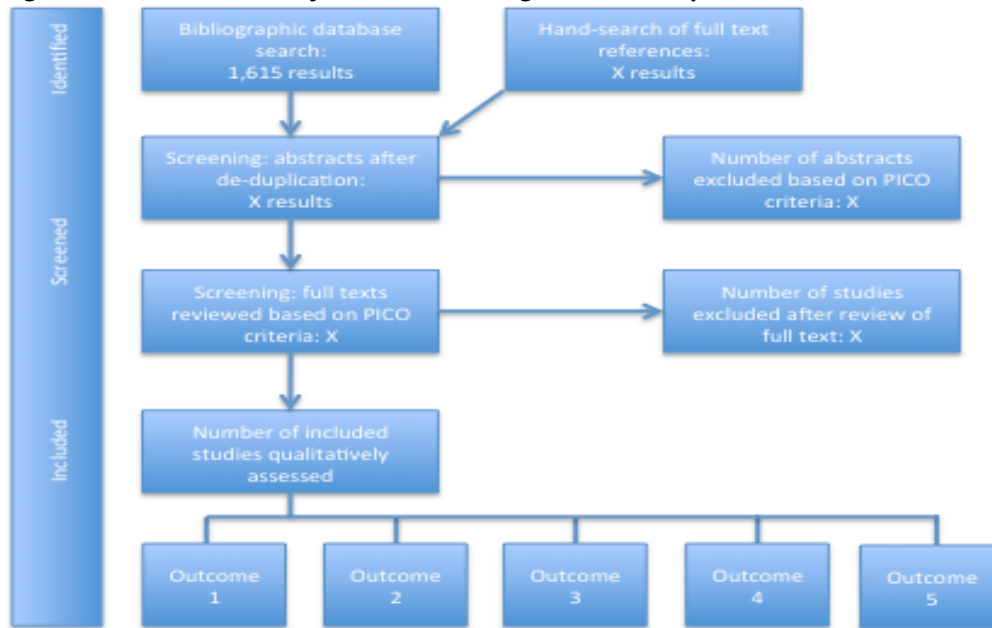


Table 2. Included studies

| Intervention <i>First author, year (Time period)</i> | Region | Study design | Intervention description | Study comparison |
|---|--------|--------------|--------------------------|------------------|
| | | | | |

Table 3. Interventions targeting postpartum family planning outcomes

| Study | Assessment grade | Outcome variables measured (sample size) | Direction of effect (p value) |
|-------|------------------|---|----------------------------------|
| | | | |

For each outcome, information will be drawn from each study that measures that indicator. The researchers will categorize each outcome variable for each study based on whether the results demonstrated a positive effect on the outcome, a negative effect, or no evidence of an effect. The researchers will then assign one of four categories to each outcome of interest: robust evidence of an effect, modest evidence of an effect, conflicting evidence of an effect, and no evidence of an effect.

Table 4. Synthesis of results

| Outcome variable | Number of | Number (%) with | Number (%) with | Conclusion |
|------------------|-----------|-----------------|-----------------|------------|
| | | | | |

| | interventions measuring this outcome | statistically significant effect | positive statistically significant effect | (robust, modest, conflicting, no evidence) |
|---|--------------------------------------|----------------------------------|---|--|
| Postpartum family planning use | | | | |
| Intention to use | | | | |
| Time to family planning initiation postpartum | | | | |
| Contraceptive prevalence at 3/6/9/12/18 months | | | | |
| Incidence of unintended pregnancy at 1/2 years postpartum | | | | |
| Knowledge of family planning | | | | |
| Use and/or knowledge by type of method | | | | |

Finally, the researchers will conduct a sub-group analysis based on the types of interventions included in the review and the outcomes measured in the corresponding studies. Intervention types may include: facility-based (ANC), facility-based (labor and delivery), facility-based (outpatient), community-based (integrated), community-based (skilled and unskilled workers), community-based (unskilled workers only).

Table 5. Types of interventions by outcome measured

| Intervention type | Outcomes measured | Outcomes with positive statistically significant effect |
|-------------------|-------------------|---|
| | | |

Discussion

We anticipate that the results will indicate which types of postpartum family planning programs in less developed countries are appropriate for expansion, which should be reconsidered, and where further research is needed. We may also deduce which programs are having positive, negative, or no effect on postpartum family planning outcomes, and make recommendations for future evaluation.

The approach of this research using a qualitative assessment of a wide range of heterogeneous study types allows for a broader analysis than a standard meta-analysis or review limited to randomized controlled trials or quasi-experimental studies. Our aim is to capture as much information as may be useful to respond to the question of available evidence for targeting postpartum family planning in less developed countries.

References

1. Statement for Collective Action for Postpartum Family Planning [Internet]. 2012 [cited 2013 Sep 16]. Available from: <http://www.scribd.com/doc/99652961/Statement-for-Collective-Action-for-Postpartum-Family-Planning>
2. WHO and MCHIP/Jhpiego Initiate Call to Action on Postpartum Family Planning | MCHIP [Internet]. [cited 2013 Sep 16]. Available from: <http://www.mchip.net/node/849>
3. Adegoke A, van den Broek N. Skilled birth attendance-lessons learnt. *BJOG Int J Obstet Gynaecol.* 2009;116:33–40.
4. Cleland J, Conde-Agudelo A, Peterson H, Ross J, Tsui A. Contraception and health. *The Lancet.* 14;380(9837):149–56.
5. Borda M, Winfrey W. Postpartum Fertility and Contraception: An Analysis of Findings from 17 Countries | K4Health [Internet]. [cited 2013 Sep 16]. Available from: http://www.k4health.org/sites/default/files/Winfrey_Borda_17countryanalysis.pdf
6. WHO | Unmet need for family planning [Internet]. WHO. [cited 2013 Oct 26]. Available from: http://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en/
7. Mwangi A, Warren C, Koskei N, Blanchard H. Strengthening Postnatal Care Services Including Postpartum Family Planning in Kenya. *Frontiers in Reproductive Health, Population Council, ACCESS-FP, Jhpiego*; 2008 Jun.
8. Ross JA, Winfrey WL. Contraceptive Use, Intention to Use and Unmet Need during the Extended Postpartum Period. *Int Fam Plan Perspect.* 2001 Mar 1;27(1):20–7.
9. Sonalkar S, Mody S, Gaffield ME. Outreach and integration programs to promote family planning in the extended postpartum period. *Int J Gynaecol Obstet Off Organ Int Fed Gynaecol Obstet.* 2014 Mar;124(3):193–7.
10. Arrowsmith ME, Aicken CRH, Saxena S, Majeed A. Strategies for improving the acceptability and acceptance of the copper intrauterine device. *Cochrane Database Syst Rev.* 2012;3:CD008896.
11. Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med.* 2009 Jul 21;6(7):e1000097.
12. Meline T. Selecting Studies for Systematic Review: Inclusion and Exclusion Criteria. *Contemp Issues Commun Sci Disord.* 2006;33:21–7.