Protocol:
A systematic review of interventions to improve quality of delivery, family planning and abortion services

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Background

Problem Statement

Person-centered quality refers to the range of patient experiences that include system and provider responsiveness, patient engagement with a health facility, patient-provider communication, interpersonal treatment and the range of advice, support, outreach and follow-up given or not given, respect and dignity, and emotional support.

Poor person-centered care deters people from seeking health services before and at the time of delivery. This delays initiation and adherence to antenatal-care, provision of proper care, reduces post-partum family planning uptake and other postpartum behaviors, and reduces adherence to recommended treatment, including contraception. Negative experiences in hospitals have a feedback effect, delaying and inhibiting patients’, their families’, and communities’ subsequent contact with the health sector.

In the past decade, countries across Asia and Africa have witnessed a significant shift towards facility deliveries, in all regions, in all wealth quintiles. The majority of deliveries in urban areas already take place in facilities, and as social norms change and health infrastructure improves, people from rural areas are also, increasingly, traveling to urban centers to deliver in facilities. Yet delivery within facilities has not shown the protective effect in developing countries that experts hoped for: maternal mortality remains high at 190 per 100,000 live births in 2013 despite widespread access to ‘proven’ best practices (1). Governments and health professionals must address quality of care in order to improve maternal and neonatal health outcomes. Many programs and policies have focused on improving the clinical quality of care, but much less emphasis has been given to other aspects of quality, including person-centered care and provider/patient interactions. This is needed as there is strong evidence that clinical infrastructure does not, alone, lead to better use of health services or better outcomes.

Use and completion of antenatal care remains low and often unlinked to facility care.

Less than 50% of women in both India and Kenya have 4 or more ANC visit as recommended by WHO (2,3). Women receiving proper ANC have been shown to have better nutrition and be more likely to receive proper care at delivery (4). Provider interaction is an important determinant of both early ANC entry and completion of follow-up visits (2).

Post-partum family planning uptake remains low, even following facility deliveries.

Post-partum family planning is an essential part of improving the quality of the continuum of care for women, and improving maternal and child health outcomes. Birth spacing of less than 18 months is associated with increased risk of adverse perinatal outcomes (5). Post-partum family planning has been shown to be effective at increasing birth spacing, but it is often not offered or not used. Post-partum family planning rates are below 10% at one month in most countries (5). While family planning methods are widely available, what is missing is person-centered care that encourages uptake and adherence to post-partum family planning services.

Family planning use generally remains low, especially in urban Uttar Pradesh and Kenya: Uttar Pradesh also lags behind other Indian states on a number of critical
reproductive health indicators. Uttar Pradesh reports the sixth lowest contraceptive prevalence rate (CPR) among the 28 states in India, and also has the second highest fertility rate in the country. In urban areas, the CPR is 42.2% in Uttar Pradesh compared to 55.8% in the country overall. Modern contraceptive utilization is similarly lower in Uttar Pradesh compared to the national population (59.1% vs. 70.6%, respectively). The urban poor are especially at risk, with higher rates of unintended pregnancy for urban women in the lowest wealth quintile in Uttar Pradesh (28.3%) compared to urban women in the highest wealth quintile (13.7%) (6). Kenya has witnessed declines in fertility rate and relatively high levels of contraceptive use (7). However, unintended pregnancies remain a concern, with 17% of births reported as unwanted and 26% are mistimed (wanted later). The situation for poor urban women is direr, with 29.6% of women in the poorest urban wealth quintile compared to 6.6% in the highest urban wealth quintile saying that their last pregnancy was unintended (8). One-quarter of currently married women in Kenya have an unmet need for family planning (7). More work is needed to address the needs of women, especially the poor in urban areas, in these settings.

**There are systematic failures in the quality of care within facilities.** These include delays in accessing and receiving care, and receiving person-centered support and care. A growing body of literature suggests that women in developing countries experience disrespectful, abusive, or neglectful treatment in facilities at the time of delivery (9–11). The result is that women are less likely to access health services in the future because of past experiences of poor quality care (12). Recent research has highlighted the negative impacts of poor person-centered care on medical outcomes.

**The person-centered quality approach has already demonstrated promise in improving health outcomes.** Person-centered quality refers to the range of interactions that include system and provider responsiveness, patient engagement with a health facility, patient-provider communication, interpersonal treatment, and the range of advice, support, outreach, follow-up given or not given, respect and dignity, and emotional support. This approach encourages women’s decision to seek care (delay 1), delays the time to reach or enter a facility (delay 2), and time to receive proper attention and care (delay 3). Increasing support to women – through doulas, family members, NGO activities, or facility staff—reduces delays in accessing care, increases the likelihood of receiving timely and appropriate care increases patient satisfaction with care, increases initiation and completion of ANC, exclusive breastfeeding, and identification of danger signs and postnatal care. Improving patient-provider communication of information, medical conditions, symptoms, and concerns, leads to improved adoption of best-practices including breastfeeding, post-partum family planning uptake, and immunization, as well as post-natal infant monitoring (13–15). Post-partum family planning, offered face-to-face within a facility following delivery, is associated with increased adoption and maintenance of contraception up to 7 months (16). Preliminary strategies to address disrespectful care outlined by the WHO include social support through a companion of choice, mobility, access to food and fluids, confidentiality and informed choice, assuring high quality information for women, and high quality of provider standards (17). However, implementation and adoption of these strategies have not been widespread.
**Why it is Important to do the Review**

There has recently been increased awareness of the magnitude of poor quality that women face, especially during delivery, in the developing world, such as disrespect and abuse (18). However, this has focused only on certain domains of quality and has mostly focused on delivery/childbirth. There have also been a multitude of interventions conducted with the aim to improve many aspects of person-centered quality related to delivery, family planning, and abortion services, yet there is little synthesis of these interventions or their impact. This has created a large gap, and risks people replicating the same interventions and not being able to build off of the successes (and learn from the problems) or previous work. This review seeks to fill this gap by providing a comprehensive review of past interventions conducted which aimed to improve people-centered care for delivery, family planning and abortion. This will help policy makers and practitioners design and implement programs and interventions that build off of past experiences and apply tested strategies.

**Objectives**

The proposed literature review has the following main objective, which will lead into the creation of person-centered quality improvement interventions in India and Kenya:

1. To identify past strategies and interventions for improving person-centered quality of maternal health (delivery), family planning (including post-partum family planning), and abortion services.

**Methodology**

**Criteria for including studies in the review:**

The following criteria will be used to determine whether a study will be included or excluded from the literature review.

**Study designs**

To answer our review question, we will include component studies that have the following study designs:

Types of studies – included studies will include those that are intended to evaluate some aspect of a person-centered quality program and contain evidence.

The quantitative component of the review will consider both experimental and epidemiological study designs including randomized controlled trials, non-randomized controlled trials, quasi-experimental, before and after studies, prospective and retrospective cohort studies, case control studies and analytical cross sectional studies for inclusion. The quantitative component of the review will also consider descriptive epidemiological study designs including case series and descriptive cross sectional studies for inclusion. General descriptions and opinion pieces on person-centered quality programs will not be included in the analysis.
The qualitative component of the review will consider qualitative studies that explore quality improvement from the perspectives of participants in person-centered quality programs using such methodologies as in-depth interviews, participant observation and focus groups that draw on such techniques as phenomenological analysis, grounded theory or ethnography. These studies must report individual narratives from participants and must include discussion of factors that determine individual’s participation in, and benefits from, person-centered quality programs.

**Population**

- Women of reproductive age (15-49 years) participating in a person-centered quality intervention and/or
- Male adopters of family planning at any age

**Types of interventions**

Type of person-centered quality improvement interventions: We will include studies on person-centered quality improvement interventions where participants receive person-centered quality care aimed at improving quality outcomes for maternal health (delivery), family planning (post-partum specifically and more generally), and abortion services.

- **Person-centered quality** refers to the range of patient experiences that include system and provider responsiveness, patient engagement with a health facility, patient-provider communication, interpersonal treatment and the range of advice, support, outreach and follow-up given or not given, respect and dignity, and emotional support.
- To be included, the person-centered quality improvement intervention will address maternal health (delivery), family planning (including post-partum), and abortion services, with a focus on those related to people centered care.

**Types of outcome measures**

To be included in the review, studies must measure at least one of the following quality improvement outcomes, as defined below:

- Maternal health (antenatal care, delivery, and postnatal care)
- Family planning (including postpartum)
- Abortion services

**Language**

Included studies will be limited to those with an abstract published in English. Only publications with an English abstract will be included in this review due to the limited availability of publications and search engines in other languages and the language capacity of the team. Non-English publications with an English abstract will be reviewed for relevance and an appropriate translation will be sought when necessary. Our systematic search strategy can be replicated in the future to include updated evidence and can be expanded to include additional foreign language databases.
**Time frame**

- Include studies conducted from 1990 – present, due to the increased focus on quality of family planning services after this time period.
- Exclude studies that were not conducted within this period.

**Exclusion criteria**

Editorials, newspaper articles and other forms of popular media will be excluded. Failure to meet any one of the above eligibility criteria will result in exclusion from the review and any apparent discrepancies during the selection process will be resolved by a third, independent reviewer. The number of excluded studies (including reasons for exclusion for those excluded following review of the full text) will be recorded at each stage.

**Search methods for the identification of studies**

**Electronic searches**

The literature search will occur in two phases. The first phase will involve searching databases using specific search terms, and the second phase will include reviewing all reference lists for appropriate articles.

**Phase 1:** The first phase will involve searching the following databases:

- PubMed ([http://www.pubmed.gov](http://www.pubmed.gov))
- Econlit
- CINAHL

**Phase 2:** Phase two will consist of contacting key experts for additional information and searching the grey literature for dissertations, theses, government reports, non-governmental organization reports and funder reports including:

- Search Engines (limited to the first 100 hits ordered by relevance):
  - Google Scholar ([https://scholar.google.com](https://scholar.google.com))

- Dissertations and Theses:

**Other Searches**

1. Multi-lateral Organizations (limited to the first 100 hits ordered by relevance):

Gates Foundation, Jhpiego, Engender Health, IPPF, Marie Stopes International, Population Services International,

2. We will also contact key personnel at a selection of the following organizations and foundation to elicit additional grey or unpublished information:


A search diary will be maintained describing the databases searched, the keywords used, and search results.

Search terms
The following search strategy will be used to search databases and will be adjusted to fit the diversity of search options available for each database. After discussion and consultation with content experts and search strategists, we will include general keywords around the outcome of interest in our search strategy.

The basic search terms used will be:

1. **Maternal Health:** ("Maternal Health Services" OR "maternal health" OR "maternal welfare" OR "maternal welfare" OR antenatal OR "ante natal" OR perinatal OR "peri natal" OR postnatal OR "post natal" OR postpartum OR "post partum" OR intrapartum OR "intra partum" OR "maternal mortality" OR "maternal death" OR "maternal morbidity" OR "maternal mortality rate" OR "maternal complications" OR "obstetric delivery" OR "obstetric deliveries" OR "delivery, obstetric" OR "obstetric labor" OR "caesarean section" OR "vaginal birth" OR pregnancy OR childbirth OR parturition OR birth OR births OR "live birth" OR "home childbirth" OR "traditional birth attendant" OR "skilled birth attendant" OR doula OR doulas OR midwife OR midwives) AND ("patient-centered care" OR "woman centered care" OR "person centered care" OR "client centered care" OR communication OR communicate OR respect OR disrespect OR disrespectful OR dignity OR stigma OR neglect OR mistreatment OR "emotional support" OR "experience of care" OR abuse OR privacy OR "perceived quality" OR "patient satisfaction" OR "healthcare quality" OR "cultural competence" OR "clinical competence" OR "informed choice" OR counseling OR "patient provider interaction" OR "provider responsiveness" OR "patient participation" OR "patient involvement" OR "patient empowerment" OR "patient engagement" OR "patient safety" OR "quality of health care") AND (intervention OR evaluation OR program OR "program evaluation")

2. **Family Planning:** (contraception OR "family planning" OR "family planning services" OR "family planning programs" OR "natural family planning" OR "natural method" OR "rhythm method" OR "morning after pill" OR "barrier method" OR "permanent method" OR "ovulation inhibition" OR "ovulation suppression" OR condom OR condoms OR diaphragm OR diaphragms OR spermicide OR "intrauterine device" OR IUD OR "contraceptive iud" OR "intrauterine contraceptive device" OR "contraceptive implant" OR implant OR "contraceptive sponge" OR "today sponge" OR depoprovera OR "cervical cap" OR femcap OR "fertility awareness" OR "hormonal method" OR microbicide OR "multipurpose prevention technologies" OR MPTS OR "reproductive health" OR "sexual health" OR "stock-out" OR "unmet need" OR "unplanned pregnancy" OR...
Data collection and analysis

Selection of studies

In the first stage, team members will independently review titles and abstracts or executive summaries (where available) and exclude all references that are clearly irrelevant. Duplicate references will also be excluded.

In the second stage, two team members working independently will apply the specified inclusion/exclusion criteria to the remaining abstracts and determine whether the study should be included for analysis. In the case of a discrepancy between the two reviewers' assessments, the case will be discussed with a third team member for a decision. Where necessary, the full text of an article may be retrieved to determine eligibility of studies for inclusion.

Data extraction and management

Two team members working independently will extract information from each study included in the review. Both team members will use a pre-piloted data extraction form and summarize data in a table. Disagreements in coding will be resolved through discussion. If no agreement can be reached, a third independent member of the team will be used to resolve the disagreement. Study, group, outcome and effect level data extraction and coding forms will guide the data extraction.
Assessment of risk of bias in included studies

Independent reviewers will assess quantitative study rigor using a published list of criteria, developed by 3ie, to assess risk of bias in social experiments and quasi-experiments (19). The critical appraisal tool will assess the likely risk of the following biases:

1. Selection bias and confounding, based on quality of attribution methods (mechanisms of assignment/identification), and assessment of group equivalence
2. Performance bias, based on the extent of spillovers to women in comparison groups;
3. Outcome and analysis reporting biases
4. Other biases, including:
   a. unit of analysis errors
   b. detection bias and placebo effects
   c. motivation and courtesy biases (Hawthorn effect; John Henri effect)
   d. coherence of results,
   e. retrospective baseline data collection
   f. other biases.

We will judge whether a study is subject to high/medium/low risk of bias for each of these risk of bias categories using the following decision rules:

For quantitative data:
Studies will be critically appraised according to the likely risk of bias based on: 1) the quality of attribution methods (addressing confounding and sample selection bias); 2) the extent of spillovers to participants in comparison groups; 3) outcome and analysis reporting bias; and 4) other sources of bias. We will assess risk of bias among these domains using the decision rules in the International Development Coordinating Group (IDCG) risk of bias tool. In addition, the following classifications will be made according to their respective definitions:

Low risk of bias: appropriate and clearly described selection of participants, measurement of exposure and outcome variables, use of design and analytical methods to control confounding; low risks of spillovers or contamination; low risk of outcome and analysis reporting bias.

Medium risk of bias: inappropriate or unclear use of one of the following: selection of participants, measurement of exposure and outcome variables, use of design or analytical methods to control confounding, assessment of risks of spillover or contamination; medium risk of outcome and analysis reporting bias.

High risk of bias: inappropriate use of two or more of the following: selection of participants, measurement of exposure and outcome variables, use of design or analytical methods to control confounding, assessment of risks of spillover or contamination, high risk of outcome or analysis reporting bias.

Unclear risk of bias: unclear description of any of the following: selection of participants, measurements of exposure and outcome, study design or analytic methods to control for confounding, assessment of risks of spillover or contamination.

We will report risk of bias assessment for each included study, conducting sensitivity analyses by overall risk of bias classification and, where sufficient studies are available, for each risk of bias domain.
**For qualitative data:**

The results of the quality appraisal will be reported in the review and we will conduct a sensitivity analysis to assess how sensitive our findings are to the removal or addition of studies of varying quality(21).

**Quantitative Synthesis**

Since meta-analysis is not possible due to high heterogeneity in the quantitative studies (for example, different outcomes, definitions/structure of the populations of interest, specific interventions applied, etc.), we will present descriptions of study characteristics, outcome measures, and key findings. We will summarize overarching themes and consistency of directions of outcomes for interventions and measures that share common characteristics. Similar approaches have been used elsewhere (18).

**Qualitative Synthesis**

Qualitative analysis will consist of a thematic analysis, which is an iterative process where researchers will discuss the emergent themes from studies and determine how they are related, or dissonant, through a compare and contrast exercise. Key concepts will be translated within and across studies, and will result in a new interpretation of those themes. The meta-synthesis of qualitative studies will follow the Walsh and Downe (22) framework. Thematic analysis techniques will be used to synthesize qualitative study results. The studies will be read repeatedly to extract the concepts, categories, metaphors and themes used to describe or interpret the accounts provided by the women interviewed. The emergent themes will be discussed extensively among the research team and the studies will be reread to consider any evidence that could be refuted (23). Discussions between team members will help to build consensus on the themes.
Sample Result Table

<table>
<thead>
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<th>Study</th>
<th>Type of intervention/strategy</th>
<th>Location</th>
<th>Population</th>
<th>Outcome(s)</th>
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Declarations of interest

The authors declare no conflicts of interest.

Preliminary timeframe

Approximate date for submission of the review: Spring 2016.

Plans for updating the review

Review authors will be responsible for updating this review as additional evidence accumulates and as funding becomes available.
References


