RESEARCH ARTICLE

Gaps and evidences on programming postpartum family planning services in Nepal [version 1; peer review: 2 approved with reservations]

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Abstract

Background: Postpartum family planning (PPFP) is one of the strategic efforts mentioned in the National Family Planning Strategy 2011/12 and National FP Costed implementation plan 2015-2020 of Nepal. Postpartum women are recognized as one of the groups that need attention to strengthen FP services in the country.

Methods: We conducted a situational analysis in Nepal from December 2019 to May 2020, to identify the needs, gaps and provide evidence for strengthening future programming in this area using a combination of three methods: (i) non-systematic literature review using Google Scholar, Pubmed, and grey literature, (ii) secondary analysis using the dataset from Nepal Demographic and Health Survey (NDHS) 2016 that was based on a two-stage, stratified, nationally representative sample of households, and (iii) virtual assessment in purposively selected eight health facilities using a standard checklist related to PPFP.

Results: Results show a lower modern contraceptive uptake (22.6%) and higher unmet need (31.5%) among postpartum women compared to all currently married women (43% and 24% respectively). Three most commonly used modern contraceptive methods among postpartum women in Nepal are injectables (8%), male condoms (7%), and oral contraceptive pills (3%). The PPFP services are available only in limited health facilities and were not integrated in Antenatal care (ANC), Postnatal care (PNC), childbirth and immunization services. Provision of family planning counseling during the ANC period is not recorded in the ANC card. Male partners do not participate in family planning counseling. Similarly, the uptake of family planning services at immunization, child health, and postnatal clinics is not recorded.
Conclusion: This analysis provided evidence of the current status of PPFP in the country. There are gaps and challenges especially in strategy and guidelines, training, regular supply of commodities, awareness of PPFP, recording and reporting of PPFP. These gaps should be addressed with appropriate strategies.

Keywords: postpartum family planning, Nepal, unmet need, situational analysis, contraceptive uptake
Introduction

World Health Organization (WHO) defines postpartum family planning (PPFP) as the prevention of unintended or closely spaced pregnancies through the first 12 months following childbirth and focuses on providing family planning (FP) counseling and services to women and couples. According to a Demographic and Health Survey (DHS) data analysis from 27 countries, 95% of women who are 0–12 months postpartum want to avoid a pregnancy for the next 24 months. WHO recommends PPFP as a critical component of health care with the potential to save millions of maternal and infant lives. For instance, increasing the inter-pregnancy spacing to 24 months, maternal and under-five mortality can be reduced drastically by 30% and 13%, respectively.

In 2019, WHO’s Department of Sexual and Reproductive health and Research embarked on the FP Accelerator project with a goal to improve access to quality and rights-based FP services. The project supports Ministries of Health (MoH) and partners to accelerate quality of rights-based FP services within the broader framework of Sustainable Development Goals (SDG), Universal Health Coverage (UHC), and the 13th General Program of Work (GPW). 14 countries from three WHO regions (Eastern Mediterranean, South-East Asia, and Africa) are identified for intense support under the project. Nepal is identified as one of the countries. This project builds on the gains of the previous WHO FP Umbrella project.

The Ministry of Health and Population (MoHP) Nepal recognizes the importance of FP and is striving to strengthen PPFP services so that individuals and couples can plan and accomplish their desired number of children, with appropriate spacing and reduce the incidence of unintended pregnancies, unsafe abortions, and maternal deaths. To ensure the country achieves its target of 60% modern contraceptive prevalence rate (mCPR) and unmet need of 10% by 2030, the MoHP initiated dedicated efforts to upgrade its ongoing FP programs based on recent evidences. Findings from the Nepal Demographic and Health Survey (NDHS) 2011 revealed mCPR as 39% and unmet need for FP as 52% among postpartum women. The median birth interval among Nepali women is 36.7 months, with younger women having shorter birth intervals of 22.6 months and 21% of births occur < 24 months after preceding birth. The percentage of children born after a short birth interval has remained constant since 2011 at 21%. Additionally, the duration of postpartum insusceptibility following a birth has fallen from 11.4 months in 2001 to 7.8 months in 2016. This is despite the increase in proportion of women (from 53% in 2006 to 70% in 2011) who are exclusively breastfeeding.

PPFP is one of the strategic efforts in National Family Planning Strategy 2011 and National Family Planning Costed Implementation Plan 2015–2020. Postpartum women are also recognized as one of the groups that need attention to strengthen FP services in the country. Considering the increasing trends in antenatal care (ANC), institutional delivery, postnatal care (PNC), and immunization in Nepal, the Family Welfare Division (FWD) of the MoHP undertook this situational analysis to assess the landscape for postpartum family planning programming in the country, identify the gaps, and provide evidence for programming PPFP services.

Methods

Ethical approval

Due to COVID-19 restrictions, data collection was completed via telephone with oral approval taken from the staff participating in the study to provide information prior to the interview. This work was done at the programmatic level hence ethical approval was not taken from an IRB. Approval for the study was obtained from the Ministry of Health and Population – Family Welfare Division, with the recommendation that verbal consent was obtained from participants prior to participation in the study.

Study design

A combination of three methods was used to conduct this situational analysis: (i) desk review of documents and literature published on PPFP in Nepal, (ii) secondary analysis of NDHS 2016, and (iii) rapid assessment of health facilities. The original study design included rapid assessment at eight health facilities, but COVID-19 related travel restrictions prevented that thus the information was collected over telephone. Data collection was done from December 2019 to May 2020.

(i) Desk review- Information for this analysis was collected using a non-systematic search strategy from the following electronic databases - PubMed and Google Scholar for all studies published between 2015 and 2020 in the English language. The following search terms were used: ‘postpartum family planning’, in combination with ‘policy, strategies and guidelines’, ‘human resources or training or work force’, ‘health management information system’, ‘commodities supplies or supply chain management’, ‘budget, resources’, and ‘community or male/men engagement’. Additionally, national policies, strategies, reports (annual reports of the Department of Health Services (DoHS) and NHFS), working papers, policy briefs, and conference presentations on PPFP were reviewed from the websites of MoHP (https://www.mohp.gov.np/eng/) / DoHS (https://dohs.gov.np/) / FWD (https://fwd.gov.np/) and other agencies including the Family Planning Association of Nepal, the Embassy of United States of America, Marie Stopes International, United States Agency for International Development Nepal, United Nations Population Fund, The Adventist Development, and Relief Agency, Nepal CRS company.

(ii) Secondary analysis of NDHS 2016- The NDHS 2016 was analyzed further using descriptive statistics, to determine the use of FP services, unmet need for FP, and contact points for women during the period from the last birth through 12 months postpartum. Secondary data analysis was conducted for 962 women with the dataset from NDHS 2016, which was based on a two-stage, stratified, nationally representative sample of households. NDHS 2016 survey is the latest national-level survey done on FP and other reproductive health components. The data are open for all [1]. There was no data and information regarding the postpartum FP in the regularly published report. Hence, we conducted a secondary analysis to retrieve the data.
additional information on PPFP. No other special inclusion and exclusion criteria in addition to postpartum criteria. The data was also used to analyse the patterns in contraceptive uptake in the postpartum women based on the following variables: birth order (1st, 2nd, 3rd), province (Bagmati, Gandaki, Karnali, Province 1, Province 2, Province 5, Sudur Pachhim), place of residence (Urban, Rural), education level (no education, primary, secondary, SLC & above), religion (Hindu, Buddhist, Muslim, Christian) and wealth quintile (richest, richer, middle, poorer, poorest).

(iii) Rapid assessment of health facility – Eight health facilities (four hospitals, two primary health care centers, and two health posts) with birthing centers were purposively selected for the assessment from Province no. 1, Bagmati and Lumbini provinces. We excluded health facilities without a birthing center. The key service providers were telephonically interviewed to collect the information. Two standard checklists were developed (one for hospital and another for primary health center and health post11), that consisted of questions on: the availability of FP services in the facility during the last three months, type of PPFP services in facility, details on FP counseling during ANC, immediately after delivery, post delivery room, post-natal, immunization and nutrition clinics, availability of IEC materials and guidelines/protocols on PPFP in facility, supply of FP commodities, and participation of staff in PPFP training in last 12 months. The interviewer contacted the main service provider of the health facility, who was identified from the records of the Family Welfare Division and the concerned District Health offices. They were informed about the purpose of the assessment and collected information using the checklist after getting verbal approval. It took approximately 60–90 minutes for the interview. The checklists were manually analyzed, by preparing dummy tables and entering data into these tables from the information in the checklists. Further interviews by telephone were conducted in two health facilities to collect missing information. While reviewing the checklist, a few points were missing, so the interviewees were called again to fill in missing data/information in the checklist.

A consultation meeting was held with 21 national stakeholders working in the area of family planning (government, non-government organizations, FP experts, and UN agencies) to share the objectives, methodology and findings of this analysis. These stakeholders were identified through the Family Welfare Division. They are members of the FP Sub-committee under the Family Welfare Division. Additional members were invited as FP experts who had contributed to the FP program in the past but did not hold any position formally. They were sent an email invite and their inputs were collected on the findings of the analysis. A blank English form was distributed to them for collection of their inputs especially on solving the problems identified in the draft report and recommendations from the situational analysis. The form collected their recommendation based on the thematic areas like health services, health workforce, medicine and technology, health financing, leadership and governance, and community and social-cultural issues. Their inputs were analyzed manually and used for the recommendations.

Results

We reviewed a total of 106 documents including articles (41), GoN policies, strategies, standards, guidelines, plans and protocols (29), study reports (15), policy briefs (8), handbook (5) and others (8).Findings from the situational analysis were grouped into seven pre-defined categories listed in WHO programming strategies for PPFP: (i) health services, (ii) health workforce, (iii) health management information systems, (iv) medicines and technology, (v) health financing, (vi) leadership and governance, and (vii) community and sociocultural issues 13,14.

Health services

Availability of FP services across different health facilities.

There are 3,808 health posts (HPs) in Nepal that serve as the first institutional contact point for service delivery. These health posts provide services and monitor activities of female community health volunteers (FCHVs) and centers for community-based activities. The minimum service standards (MSS) for HPs includes availability of FP services between 10 am to 4 pm, with a separate space for FP counseling and services and a dedicated health staff assigned. The district hospital MSS does not mention any standards for FP service provision. The MSS at tertiary hospital includes availability of FP services between 10 am to 3 pm with a minimum of two mid-level health staff assigned for FP services 15.

In Nepal, short acting reversible contraceptives (male condoms, oral pills, and depo injection/injectables) are provided through primary health care outreach clinics (PHC-ORC), primary health care center (PHCCs), and HPs. Long-acting reversible contraceptives (IUCDs and implants) are only available in hospitals, PHCCs, and selected HPs with trained and skilled providers 16. The FCHVs provide information and educate the community, distribute condoms and resupply oral contraceptive pills. Table 1 shows the contraceptive methods offered by different levels of the public health system.

The National FP strategy 2011–12 envisioned the availability of five types of temporary FP methods (male condoms, pills, depo injection, IUCD, and implants) in all health facilities including PHCs and HPs17. However, the NFHS 201518 showed that only 14% of health facilities provide all five types of modern methods, while 93% of facilities provide three modern contraceptives (pills, depo injection, and male condom). Male and female sterilization services was offered by < 3% of health facilities, while IUCD and implants were offered by 20.9% and 19.8% facilities, respectively 19.

Findings from the rapid assessment of health facilities is depicted in Table 2. Our assessment showed that five temporary FP methods were available in seven out of eight surveyed facilities. Male and female sterilization services, PPIUD,
and postpartum tubal ligation were available in three out of four hospitals. All included facilities offered at least one PPFP method. The lack of trained service providers was the reason for one health post not offering IUD and implant services and one hospital not offering male and female sterilization services.

**Availability of service guidelines, trained staff, and equipment.** To offer quality FP services to clients, health facilities should have trained health providers, national FP guidelines, and adequate FP supplies. Around one-third (31%) of the eight facilities offering modern contraceptives have at least one staff trained in the past 24 months on some aspect of FP service delivery. According to NHFS 2015, FP guidelines were available in 13% of facilities offering modern contraceptives, 29% of zonal and above hospitals, and were unavailable at all the urban health centers. Only 1% of private facilities have the FP guidelines available, as compared to 14% public facilities. The FP registers and FP kits were available in 89% and 29% of facilities.

The rapid assessment survey showed health staff from three facilities were trained in PPFP in the last 12 months and Medical Eligibility Criteria (MEC) wheel for contraceptive use and Decision Making Tool (DMT) were available at six facilities.

**Utilization of FP services.** Secondary data analysis of NDHS 2016 showed that the total unmet need for FP among postpartum women was 31.5% (17.8% for spacing and 13.7% for limiting) and this increased steadily from childbirth (21%) to end of five months after birth (34%). The unmet need for spacing among postpartum women (17.8%) is more than twice of that among currently married women (8%). The unmet need for

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**Table 1.** Type of FP services provided by different levels of health facilities in Nepal.

<table>
<thead>
<tr>
<th>Type of facility</th>
<th>Condom</th>
<th>Pill</th>
<th>Injectable</th>
<th>IUCD</th>
<th>Norplant</th>
<th>Vasectomy</th>
<th>Mini lap</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCHV</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PHC-ORC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HPs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PHCC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hospital</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

* FCHV can only resupply pills. Source: MoHP, DoHS, FHD. National Family Planning Strategies, 2011

**Table 2.** Findings from rapid assessment: availability of family planning (FP) and postpartum family planning (PPFP) methods in eight health facilities.

<table>
<thead>
<tr>
<th>Availability of five temporary FP methods</th>
<th>Hospital 1</th>
<th>Hospital 2</th>
<th>Hospital 3</th>
<th>Hospital 4</th>
<th>PHC1</th>
<th>PHC2</th>
<th>HP1</th>
<th>HP2</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

1. Availability of five temporary FP methods
2. Availability of permanent methods
3. Availability of at least one PPFP method
4. Availability of PPIUD (after 48 hours of delivery) & postpartum tubal ligation
5. Availability of separate FP counseling room, counseling kit, and Information, Education and Communication (IEC) material
6. Availability of Decision Making Tool (DMT) and Medical Eligibility Criteria (MEC) wheel

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spacing is highest among those aged 15–19 (33.5%), while unmet need for limiting is highest among 40–44 year old (26.9%). The mCPR is 46% lesser among postpartum women compared to currently married women (22.6% vs. 43%). Table 3 compares the FP indicators between all currently married women and women in the postpartum period.

The mCPR steadily increases from childbirth to end of one year, from 4% at < 2 months to 31% at 9–11 months. Figure 1 depicts the contraceptive uptake during postpartum period.

The three most popular contraceptive methods among postpartum women in Nepal are injectable depot/ injectables (8%), male condom (6.7%), and combined oral pills (2.5%), as compared to female sterilization (15%), male sterilization (6%), and injectable (9%) among all currently married women. Use of traditional FP methods is similar among postpartum women (10%) and all currently married women (9%). The contraceptive prevalence rate (CPR) for all methods is highest among postpartum women aged 35–39 years (46%) and least among postpartum women aged 40–44 years (26%). Table 4 depicts the CPR among postpartum women by background characteristics.

Further analysis of NDHS 2016 showed the most common source of modern contraceptive methods among postpartum women is a health post or a sub-health post (31%), followed

<table>
<thead>
<tr>
<th>Table 3. Comparison of family planning (FP) indicators between all currently married women and postpartum women.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family planning indicator</strong></td>
</tr>
<tr>
<td>Total unmet need for family planning</td>
</tr>
<tr>
<td>Unmet need of spacing</td>
</tr>
<tr>
<td>Unmet need of limiting</td>
</tr>
<tr>
<td>Overall Contraceptive prevalence rate</td>
</tr>
<tr>
<td>Modern methods</td>
</tr>
<tr>
<td>Traditional methods</td>
</tr>
<tr>
<td>Method mix</td>
</tr>
<tr>
<td>Combined oral contraceptive pills</td>
</tr>
<tr>
<td>Male condoms</td>
</tr>
<tr>
<td>Implants</td>
</tr>
<tr>
<td>Injectable</td>
</tr>
<tr>
<td>IUD</td>
</tr>
<tr>
<td>Male sterilization</td>
</tr>
<tr>
<td>Female sterilization</td>
</tr>
<tr>
<td>Other methods (Emergency Contraception and Lactational Amenorrhea Method)</td>
</tr>
</tbody>
</table>

Figure 1. Trends in use of contraceptives during the postpartum period.
by a pharmacy (23%). Nearly 14% PP women avail the method from government hospitals. However, in private health facilities, 7.9% of postpartum women uptake PPFP.

**Integration into reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH+N) services.**

Women are more likely to engage with the healthcare system throughout pregnancy and the first year following childbirth, for ANC visits, childbirth, PNC visits, and immunization of infant. In Nepal, 84% of women received ANC from a skilled provider, 57% women had institutional delivery, 57% received PNC within 48 hours of birth, and 98% of children received at least one vaccination during their 1st year of life. However, among women who had a live birth, only 13% were given information on FP during the postpartum period. A further analysis of NDHS 2016 confirmed that among 53.3% of postpartum mothers who were not using any contraceptives and were visited by a field worker in the 12 months preceding the survey, only 42% of them were counseled about FP. Similarly, of the 86% of postpartum mothers not using any contraceptives who visited a health facility in 12 months preceding survey, only 22% were told about FP.

The rapid assessment survey showed that seven facilities offered FP counseling during the ANC period, although no specific guidelines on counseling during ANC were available in these facilities. Three facilities offered FP counseling prior to discharge from the maternity ward. A dedicated space for FP counseling was available in five facilities.

**Health workforce**

**In-service training** - The majority of service providers in Nepal are trained on FP through in-service training. The National Health Training Center (NHTC) conducts FP trainings for different cadres of health staff. Among them, the comprehensive FP and counseling service training curriculum includes a separate chapter on PPFP, covering topics of extended PPFP, return to fertility, and post-partum contraceptive methods, including Lactational amenorrhea method (LAM). In 2015, the Nepal Society of Obstetricians and Gynecologists (NESOG) with support from the International Federation of Gynecology and Obstetrics (FIGO) initiated a project to institutionalize immediate PPFP services by offering PPFP/PPIUD counseling and services. The three-year project (2015–18) was conducted in two phases at eight hospitals. During the first phase 383 service providers were trained on PPIUD. Following this, service providers were mentored to enhance knowledge, attitudes and skills. No further PPIUD training programs were conducted after the end of this project.

**Pre-service training** - The Bachelor of Science (BSc). Nursing courses, medicine, and paramedical courses curriculum were reviewed, and it was realized that none of them included content on PPFP. Though, the Bachelor of midwifery curriculum at the Kathmandu University included content on postpartum IUCD.

**National tools and staff development** - The Government of Nepal strengthened FP services by use of decision-making tool (DMT) and WHO medical eligibility for contraceptive (MEC) in five provinces and 16 districts. Both these job aids comprised of information about PPFP. A two-day orientation was conducted for staff of hospitals, PHCCs, and health posts. Similarly, FP micro planning was achieved in three provinces.

**Health management information system (HMIS)**

The HMIS Recording and Reporting Guidelines 2019 requires any person visiting a health facility for any type of FP service, to fill up designated registers and forms: master register (HMIS 1.1), health service card (HMIS 1.2), referral slip (HMIS 1.4), defaulter/discontinuation tracing slip (HMIS 1.5), tally sheet (HMIS 1.6), FP face sheet (HMIS 3.1), pills and depo

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**Table 4. Contraceptive prevalence among postpartum women based on background characteristics.**

<table>
<thead>
<tr>
<th>Birth order</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>33%</td>
<td>24%</td>
<td>9%</td>
</tr>
<tr>
<td>Second</td>
<td>38%</td>
<td>26%</td>
<td>11%</td>
</tr>
<tr>
<td>Third</td>
<td>24%</td>
<td>17%</td>
<td>6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Province</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagmati (highest)</td>
<td>52%</td>
<td>48%</td>
<td>4%</td>
</tr>
<tr>
<td>Karnali (lowest)</td>
<td>10%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>Province 1</td>
<td>43%</td>
<td>31%</td>
<td>12%</td>
</tr>
<tr>
<td>Province 2</td>
<td>18%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Province 5</td>
<td>32%</td>
<td>24%</td>
<td>8%</td>
</tr>
<tr>
<td>Gandaki</td>
<td>26%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>Sudur Pachhim</td>
<td>35%</td>
<td>25%</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place of residence</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>36%</td>
<td>27%</td>
<td>9%</td>
</tr>
<tr>
<td>Rural</td>
<td>26%</td>
<td>17%</td>
<td>9%</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Educational level</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>28%</td>
<td>19%</td>
<td>9%</td>
</tr>
<tr>
<td>Primary</td>
<td>21%</td>
<td>16%</td>
<td>5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>35%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>SLC&amp; above</td>
<td>40%</td>
<td>30%</td>
<td>10%</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Religion</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
<td>32%</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>Buddhist</td>
<td>34%</td>
<td>31%</td>
<td>3%</td>
</tr>
<tr>
<td>Muslim</td>
<td>17%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Christian</td>
<td>35%</td>
<td>35%</td>
<td>0%</td>
</tr>
<tr>
<td>Kirat</td>
<td>42%</td>
<td>21%</td>
<td>20%</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Wealth quintile</th>
<th>Any method</th>
<th>Modern method</th>
<th>Traditional method</th>
</tr>
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<tbody>
<tr>
<td>Richest</td>
<td>41%</td>
<td>28%</td>
<td>14%</td>
</tr>
<tr>
<td>Richer</td>
<td>30%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Middle</td>
<td>25%</td>
<td>19%</td>
<td>6%</td>
</tr>
<tr>
<td>Poorer</td>
<td>36%</td>
<td>29%</td>
<td>7%</td>
</tr>
<tr>
<td>Poorest</td>
<td>28%</td>
<td>20%</td>
<td>8%</td>
</tr>
</tbody>
</table>
The importance of PPFP and recommending its promotion was articulated in the National FP-CIP (2015–2020) by the MoHP. The strategy envisioned the development of PPFP reference book for service providers, managers, and other staff of intervention hospitals in Nepal and to orient them on PPFP, counseling, and informed choice. This standard was last revised in 2010 and includes chapters on quality FP services at different levels of health care facilities.

In 2015, the MoHP developed the National Reproductive Health Commodity Security (RHCS) Strategy, with an aim to ensure a secure supply and choice of quality contraceptives and other reproductive health (RH) commodities to meet every person’s needs at the right time and in the right place.

In 2016, UNFPA conducted a facility-based assessment of RH commodities and services at 585 health facilities (government, non-government, and private) in Nepal and results showed stock-out of male condoms, OCPs, injectables, IUDs and implants in 4%, 5%, 7%, 16%, and 32% facilities respectively. The DoHS annual report 2017–18 showed was out of stock for condoms, injectables, and OCPs in 9%, 8%, and 13% of the 5000 facilities surveyed.

Our rapid assessment survey showed contraceptive supply was available for three months in seven facilities, while one facility had problems with the supply due to COVID-19 related transport restrictions.

Health financing
Nepal joined the FP 2020 movement in March 2015 and committed to increasing the Government FP budget by 7% each year up to 2020 and aimed to increase the number of additional users of FP by an estimated one million by 2020, provided the proportion of demand satisfied increased by 71% by then. The Government of Nepal (GoN) has increased its budget by 32% in FY 2016/17 and 22% in FY in family planning programs. An adequate flow of funds to manage the National FP program ensures that people receive regular FP services in all parts of the country.

The National Family Planning Costed Implementation plan (NFP-CIP) 2015–2020 was developed to articulate national priorities for FP and provide guidance at national and district levels on evidence-based programming for FP to achieve the expected results, as well as to identify the resources needed for CIP implementation. However, this plan is not being thoroughly reviewed and applied by donors and agencies while developing a family planning program. Lack of an annual FP work plan further increases the likelihood of work being duplicated. In addition to MoHP, major agencies working towards strengthening FP in Nepal are United States Agency for International Development (USAID), Department of International Development (DFID), United Nations Population Fund (UNFPA), International Planned Parenthood Federation (IPPF), Marie Stopes International (MSI) and Ipas Nepal.

Leadership and governance

The focus of National FP Strategy 2011/12 was to increase access to quality FP services in rural and marginalized communities and implement focused FP programs to fulfill the needs of special groups like post-partum mothers, post-abortion clients, migrants, and adolescents. Integration of PPFP services into routine FP and RH services is one of the strategic efforts stated in the National FP Strategy (2011/2012) and National FP-CIP (2015–2020).

The National Medical standard (NMS) for RH services Volume one (contraceptive services) set standards for provision of quality FP services at different levels of health care facilities. This standard was last revised in 2010 and includes chapters on PPFP, counseling, and informed choice. It is currently under further revision.

In 2010, the MoHP/FWD, with support of Nepal Family Health program, developed a PPFP reference book to initiate PPFP services at the intervention hospitals in Nepal and to orient service providers, managers, and other staff of intervention districts. The National FP-CIP 2015–2020 envisioned developing PPFP strategy and operational guidelines by 2020. The MoHP/FWD has not developed a separate strategy or guideline on PPFP yet. It has recently drafted a Nepal safe motherhood and neonatal health roadmap 2030 emphasizing the importance of PPFP and recommending its promotion.

Medicines and technology
In 2015, the MoHP developed the National Reproductive Health Commodity Security (RHCS) Strategy, with an aim to ensure a secure supply and choice of quality contraceptives and other reproductive health (RH) commodities to meet every person’s needs at the right time and in the right place.

In 2016, UNFPA conducted a facility-based assessment of RH commodities and services at 585 health facilities (government, non-government, and private) in Nepal and results showed stock-out of male condoms, OCPs, injectables, IUDs and implants in 4%, 5%, 7%, 16%, and 32% facilities respectively. The DoHS annual report 2017–18 showed was out of stock for condoms, injectables, and OCPs in 9%, 8%, and 13% of the 5000 facilities surveyed.

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The Nepal Health Sector Strategy Implementation Plan (NHSS-IP) 2016–2021 aimed to increase CPR to 55% and reduce unmet need to 19.5% by 2020. The plan aims to improve method mix, expand PPIUCD services in 400 birthing centers and integration of FP into immunization, postpartum care, post-abortion care, HIV intervention in 20 districts by 2021.

The rapid assessment survey showed that none of the facilities have any special guidelines and protocols on PPFP.

Community and sociocultural issues

A study among 400 postpartum Nepali mothers showed 68.5% of them had a positive attitude towards use of PPFP. Another study on integration of FP services into an expanded program on Immunization (EPI) among women in a rural district of Nepal, found that more than half of them interviewed did not realize that they were at risk of pregnancy if they gave the infant supplementary food.

The median birth interval in Nepal is 36.7 months; with 21% births occurring in less than 24 months after previous childbirth. The inter-birth interval remained constant since 2011 at 21%. There was a decline among infants who were exclusively breastfed from 80% at 0–1 month to 41% at 4–5 months.

Organized FP programs in Nepal traditionally focus primarily on women, hence knowledge among men is poor. Male involvement in FP counseling is important as they are often the decision makers and women may hesitate to take decisions without the approval of their partners.

The rapid assessment survey showed five facilities have FP related IEC material, but none of them have the provision to take the IEC material home. Two facilities facilitate dissemination of PPFP related messages at the community level.

Discussion

In this situational analysis, we used a combination of methods to determine the landscape for PPFP programming in Nepal, identify the gaps, and provide evidence for programming PPFP services. Despite the increase in contraceptive uptake and reduction in unmet need for family planning over the years, there is significant evidence to suggest the need for a dedicated PPFP program in Nepal. This includes stalled mCPR, low levels of FP utilization among postpartum women, high levels of unwanted pregnancy, short inter-pregnancy intervals among younger age group women, and lack of separate national strategies or guidelines on PPFP despite high institutional deliveries.

Recognizing the opportunity and need for PPFP, a strategy for the integration of PPFP into routine FP services was included in the National FP strategy 2011–2012 and National FP-CIP 2015–2020. In 2010, Nepal developed a PPFP reference book under the National FP-CIP 2015–2020, committed to develop and operationalize a PPFP strategy by 2020. These initiatives however met with limited success. During assessment at the health facilities, the national PPFP guidelines or strategy was not available as they have not been developed yet. It is important to have a national strategy/ guideline on PPFP and link it with government priorities, strategies and activities that strengthen FP services in the country.

An initiative to institutionalize FP services in the immediate postpartum period at seven major referral facilities across Nepal (from Oct 2018-Mar 2019) reported 29,072 deliveries across all facilities, with 94% PPFP counseling coverage. PPIUD uptake was 5.4% and female sterilization uptake was 6.3%. In total, 52.2% of the new mothers had intention to choose a PPFP method, while 36% of mothers neither used nor had any intention to choose a PPFP method. Our rapid assessment of facilities showed that none of the facilities follow any PPFP protocol. A majority of them offer FP counseling in the ANC and immunization clinic, while a few providers offer counseling prior to discharge from maternity ward. The myths and misconceptions among the community hinders uptake of PPFP in Nepal. These findings are similar to those found in a qualitative study conducted among 14 obstetricians/ gynecologists and nurses from six tertiary level public hospitals in Nepal. They include lack of FP counselors, work overload, lack of private space for counseling, lack of IUDs and IEC materials, and lack of support from hospital management as barriers to provision of high quality PPFP services.

In summary, the review identified a number of gaps and challenges, listed in Table 5, that will need to be addressed to strengthen implementation of PPFP programs in the country.

Study limitations

Due to the COVID-19 pandemic restrictions, we were only able to conduct limited number of health facility assessments by telephone.

Recommendations

On the basis of the findings from this review, we propose the following recommendations (Table 6) for strengthening PPFP programming in Nepal.

Conclusions

This situational analysis points to the potential gaps and opportunities to improve the PPFP service delivery in Nepal. As a first step, a national guideline and strategy on PPFP should be developed to ensure standards in services and counseling during the various contact points along the life course of RMNCAH+N services. Secondly, health providers (nursing and medical) pre-service curriculums should be updated to include PPFP and trainees should receive in-service training on PPFP. Thirdly, appropriate SBBC approaches should be implemented in the community to raise awareness and change behavior and males should be encouraged to participate in FP counseling. Fourthly, regular supply of all contraceptives should be available both in private and public facilities and at all levels of services. Finally, data on PPFP use should be harmonized and systematically collected via NHMIS and used for decision making.
Table 5. Gaps and challenges identified from the situational analysis.

<table>
<thead>
<tr>
<th>GAPS AND CHALLENGES</th>
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<tbody>
<tr>
<td>1. Absence of effective IEC materials on PPFP information and services, and PPFP</td>
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<tr>
<td>information dissemination strategies.</td>
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<tr>
<td>2. The public health facilities do not have a separate space for provision of FP</td>
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<tr>
<td>counseling and services.</td>
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<td>3. Poor knowledge on PPFP among managers and service providers.</td>
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<tr>
<td>4. Only limited number of service providers are trained and oriented on PPFP.</td>
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<tr>
<td>5. Only limited number of private sector and pharmacies provide PPFP services.</td>
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<tr>
<td>6. There are myths and rumors about PPFP due to which male partners often object to</td>
</tr>
<tr>
<td>its use.</td>
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<tr>
<td>7. The fear of COVID-19 transmission further hindered the uptake.</td>
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<tr>
<td>8. There is a disruption in the regular supply of IUD, implants, essential equipment</td>
</tr>
<tr>
<td>and supplies at facilities.</td>
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<tr>
<td>9. Due to lack of National PPFP strategies and guidelines, service providers are</td>
</tr>
<tr>
<td>confused on providing PPFP services and only limited facilities have PPFP services.</td>
</tr>
</tbody>
</table>

Table 6. Recommendations based on the seven World Health Organization (WHO) programming strategies for postpartum family planning (PPFP).

<table>
<thead>
<tr>
<th>Categories</th>
<th>Recommendations</th>
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</thead>
<tbody>
<tr>
<td>1. Health services</td>
<td>i. Mandate PPFP counseling during ANC, delivery care, PNC, and immunization services in 1st year of</td>
</tr>
<tr>
<td></td>
<td>child in both private and government health facilities.</td>
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<td></td>
<td>ii. Engage and advocate with the private sector and pharmacies on provision of PPFP.</td>
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<tr>
<td>2. Health workforce</td>
<td>i. Provide training to all service providers, who come in contact with women during ANC, PNC,</td>
</tr>
<tr>
<td></td>
<td>delivery and immunization services on PPFP national standards, protocols, PPFP counseling, and</td>
</tr>
<tr>
<td></td>
<td>methods.</td>
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<td></td>
<td>ii. Review and update the pre-service curriculum of nursing and medical colleges to include</td>
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<tr>
<td></td>
<td>content on PPFP counseling and services.</td>
</tr>
<tr>
<td>3. Health management information</td>
<td>i. Revision of the ANC card to document FP counseling and women’s preferred PPFP choice.</td>
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<td>systems</td>
<td>ii. Advocate for inclusion of PPFP related information in NDHS, NHFS and DoHS annual report</td>
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<td></td>
<td>iii. Ensure regular supply of recording and reporting forms and registers.</td>
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<td></td>
<td>iv. Develop capacity of staff of provincial and local government staff on management of commodities</td>
</tr>
<tr>
<td></td>
<td>and LMIS.</td>
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<tr>
<td>4. Medicines and technology</td>
<td>i. Engage and advocate with local and provincial government on regular availability of</td>
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<td></td>
<td>contraceptives methods including PPFP services and adequately trained staff at different levels of</td>
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<tr>
<td></td>
<td>health facilities. Special focus should be on long-acting reversible contraceptives services (IUCD</td>
</tr>
<tr>
<td></td>
<td>and implants).</td>
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<tr>
<td>5. Health financing</td>
<td>i. Develop a detailed five-year PPFP costed implementation plan.</td>
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<td></td>
<td>ii. Advocate for adequate funds to expand and implement PPFP related initiatives like PPIUD,</td>
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<td></td>
<td>integration of FP services.</td>
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<tr>
<td>6. Leadership and governance</td>
<td>i. Revise the National ANC policies and guidelines to include strategies for provision of FP</td>
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<td></td>
<td>counseling during ANC visits, and its reporting/ documentation during ANC.</td>
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<td></td>
<td>ii. Develop a national FP service integration strategy and operational guidelines, to provide PPFP</td>
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<tr>
<td></td>
<td>information, counseling and services at different RMNCAH-N contact points.</td>
</tr>
<tr>
<td>7. Community and sociocultural issues</td>
<td>i. Design and implement effective social behavior change communication (SBCC) approaches to</td>
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<td></td>
<td>increase awareness and dispel myths on PPFP.</td>
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<tr>
<td></td>
<td>ii. Encourage male engagement in FP counseling sessions.</td>
</tr>
</tbody>
</table>
**Data availability**

Due to the full data containing identifiable information, it has not been made publicly available in order to protect participants. Researchers in a similar field can request further details on the rapid assessment questionnaire. The data will be made available by sending an email to srhcfc@who.int with the subject line ‘Nepal Situational analysis data on PPFP’ and explaining the reason for the data needs, confirming that the data will not be made public or misused and that the sharing is documented.

**Underlying data**

Figshare: List of Reviewed Documents according to category.docx. https://doi.org/10.6084/m9.figshare.20098871.v3

The project contains the following underlying data:

- List of Reviewed Documents according to category (1) (This includes a list of the 106 documents reviewed that include 41 articles, eight policy briefs, 15 study reports, five handbooks, 29 policies/strategies/standards/protocols and 8 other documents)

**Extended data**


This project contains the following extended data:

- Rapid assessment of health facility for PPFP services- Hospital.docx. (English version of health facility questionnaire used in study).
- Rapid assessment of PPFP services- Health posts and PHCC.docx. (English version of PPFP questionnaire used in study).

Data are available under the terms of the Creative Commons Zero "No rights reserved" data waiver (CC0 1.0 Public domain dedication).

**Abbreviations**

ANC-Antenatal care  
CIP- Costed Implementation plan  
COVID- Coronavirus disease  
CPR-Contraceptive prevalence rate  
DMT- Decision-making tool  
DoHS- Department of Health Services  
DFID-Department of International development  
EPI- Expanded programme on Immunization  
FCHV-Female community health volunteers  
FIGO- International Federation of Gynecology and Obstetrics  
FP-Family planning  
GPW-General program of work  
HMIS- Health Management Information system  
HP-Health post  
IPPF-International Planned Parenthood Federation  
MoH- Ministry of Health  
MoHP-Ministry of Health and Population  
MSS-Minimum service standards  
MSI- Marie Stopes International  
NDHS- Nepal Demographic and Health Survey  
NESOG- Nepal Society of Obstetricians and Gynecologists  
NHFS-National health facility survey  
NHTC- National Health Training Center  
NHSS-IP- Nepal Health Sector Strategy Implementation Plan  
NMS- National Medical standard  
PHC-ORC- Primary health care outreach clinics  
PHCC-Primary health care center  
PNC-Post natal care  
PPFP- Postpartum family planning  
PPIUD-Post-partum intra-uterine device  
RHCS- National Reproductive Health Commodity Security  
RMNCAH+N- Reproductive, maternal, new born, child and adolescent health and nutrition  
SDG- Sustainable Development Goals  
UHC-Universal Health Coverage  
USAID-United States Agency for International development  
UNFPA- United Nations Population Fund  
WHO- World Health Organization

**Author contributions**

RK, PP and KPA prepared the first draft with significant contribution from MH and JK. TP, KA and AJ reviewed the draft manuscript and gave valuable inputs. All authors reviewed the draft manuscript and approved the final manuscript for publication.

**Acknowledgments**

We would like to thank all the health facility in-charges and service providers who provided information during the
assessment. Further, we would like to thank all the experts who participated in the national level consultation. Special thanks to the expert Mr. Dirgha Raj Shrestha who took the responsibility of spearheading this assessment. We also acknowledge the WHO team at Headquarters, South-East Asia Regional office, and Country office Nepal for their technical and financial support to conduct this important assessment.

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Reference Source
PubMed Abstract | Publisher Full Text | Free Full Text
PubMed Abstract | Publisher Full Text | Free Full Text
Open Peer Review

Current Peer Review Status:  ?  ?

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Amanuel Tesfay Gebremedhin
Curtin School of Population Health, Curtin University, Perth, Western Australia, Australia

Kalayu Brhane Mruts
Curtin School of Population Health, Curtin University, Perth, Western Australia, Australia

- The first paragraph in the introduction section is inconsistent and ambiguous. Please consider revising it.

- The sentence "According to a Demographic and Health Survey (DHS), data analysis from 27 countries, 95% of women who are 0–12 months postpartum want to avoid a pregnancy for the next 24 months" is incorrect. Please double check the statement, reference cited for this statement is incorrect, and the figure provided is outdated.

- The authors did not clearly describe the rationale for conducting this study and utilising three distinct data sources. Specifically, it is not clear what the purpose of desk review was.

- In regards to the design of using desk review: there are various limitations that may hinder the quality and representativeness of the collected information such as limited resource, limited time frame, and non-systematic search strategy among others. I believe relying solely on these limited sources/time frame may overlook relevant information from other credible sources or organizations that could contribute to a more comprehensive analysis/perspective.

- Were the health facilities purposively selected? I wonder if the authors consider whether the gaps in postpartum family planning are similar across all health facilities?

- The rapid assessment was conducted via telephone interview. I have a major reservation of collecting data over the phone for a rapid assessment that should basically include observation. I believe this way of data collection for this particular research will have significant limitations such as:
  - Limited interactive/visual information - Certain aspects of the facility’s infrastructure
or visual cues that could be crucial for assessing the availability of family planning services may not be captured adequately in a telephone interview. Visual inspection of the facility is often necessary to assess the physical availability of resources, equipment, and informational/materials.

○ Potential for miscommunication: In a telephone interview, without visual cues, interviewers may misunderstand or misinterpret responses, leading to inaccuracies in the collected data.

○ Time constraints - as indicated by the estimated interview duration of 60-90 minutes. This extended duration may also increase respondent fatigue, leading to decreased attentiveness and potential inaccuracies in responses.

○ Have you considered the reliability of information obtained through telephone interviews?

○ Why is it justified to use the NDHS data, even without employing advanced statistical analysis to study risk factors or trends in postpartum family planning (PPFP) usage? The full report of NDHS 2016 already includes descriptive analysis. Can you clarify the benefits of using the NDHS data for this research and its contribution to the existing literature, considering that the descriptive results are already accessible in the DHS reports?

○ Although the study has several limitations, the authors only acknowledge few of them. For instance, authors should acknowledge additional limitations of their results such as the telephone interview technique for the rapid assessment, the non-systematic review approach with limited database usage etc.

○ The conclusions drawn do not appear to be supported by the study’s findings.

Is the work clearly and accurately presented and does it cite the current literature?  
Partly

Is the study design appropriate and is the work technically sound?  
Yes

Are sufficient details of methods and analysis provided to allow replication by others?  
Partly

If applicable, is the statistical analysis and its interpretation appropriate?  
Partly

Are all the source data underlying the results available to ensure full reproducibility?  
No

Are the conclusions drawn adequately supported by the results?  
No

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Perinatal epidemiology, Global health, Health service research, Pregnancy
We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.

Dickens Onyango
Kisumu County Department of Health, Kisumu, Kenya

This is a very interesting article describing the Ministry of Health process and outcomes of a situational analysis on postpartum family planning. The article is well written but there are some issues that need to be addressed.

1. Both the abstract and main manuscript do not describe the data analysis methods. It is therefore not possible to evaluate how rigorous the qualitative and quantitative analyses were.

2. The abstract presents the results of health facility assessments qualitatively. Quantitative results should be presented, my understanding is that the tool captured quantitative data.

3. I find the conclusions of the abstract too broad given the presented results.

4. The results section of the main manuscript is too long. The authors could decide on what their most valuable messages are and only present results that are pertinent to those messages.

5. To improve the general flow of the results section, I suggest that the authors restructure this section and have 3 main subsections
   - Desk review
   - Health facility evaluation
   - Secondary analysis of DHS data.

6. Some of the tables presented are not consistent with the results presented in text. For instance, Table two currently shows what appears to be the raw data while the text presents proportions.

7. There is an opportunity to improve the rigour of the results by including factors associated with some of the outcomes such as post partum FP uptake.

8. There is a nice graphic presented showing the trends in FP uptake following delivery. The
rigour of this result could be improved using survival analysis techniques. A Kaplan Meier plot would be perfect for this kind of data.

Is the work clearly and accurately presented and does it cite the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Partly

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Partly

Are all the source data underlying the results available to ensure full reproducibility?
No

Are the conclusions drawn adequately supported by the results?
No

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Infectious disease, maternal and child health, family planning

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.