



RESEARCH ARTICLE

Expanding contraceptive choice in Ethiopia: a comparative analysis of method mixes in post-abortion contraception versus routine family planning [version 1; peer review: 3 approved with reservations]

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Abstract

Background: In Ethiopia, a low contraceptive prevalence and high unmet need coupled with skewed method mix clearly signify the need for comprehensive family planning delivery strategies. Ipas implemented problem-focused intervention to improve service delivery standards and provide accessible, high-quality family planning services. This analysis seeks to compare the contraceptive method mix in routine and post-abortion contraception services and to suggest how multifaceted service delivery approaches can help address the unmet family planning need.

Methods: The intervention was implemented in 127 public health facilities providing both routine and post-abortion contraception services, from 2010 to 2017. The intervention focused on service delivery and program management gaps identified during the baseline assessment. Service data regularly collected from intervention facilities and entered into a Microsoft Excel database to conduct descriptive analysis, review trends, and monitor progress.

Results: Trend analysis of method choice patterns revealed that the share of method mix for long-acting reversible contraceptives(LARCs) rose from 3% in 2010 to 40% in 2017 in routine family planning service, whereas in the post-abortion contraception service, the share for LARCs climbed from 2% in 2010 to 62% in 2017(P<0.001). Trend analysis of LARC uptake in post-abortion contraception revealed that implant use rose from 2% in 2010 to 54% in 2017, while intrauterine device (IUD) use increased from 0.1% in 2010 to 9% in 2017. In routine program, proportion of implant acceptors increased from 3% in 2010 to 35% in 2017, while IUD acceptance increased far more slowly, from only 0.07% to 5% over the same period.

Conclusions: Comprehensive contraceptive service delivery strategies, such as integration of family planning with other maternal health services can help the service to reach clients with a variety of

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Any reports and responses or comments on the article can be found at the end of the article.

needs, a key factor for a higher uptake of LARCs by abortion clients as compared to routine family planning program.

Keywords

Expanding contraceptive choice, Method Mix, Routine family planning, Postabortion contraception

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Introduction

According to an estimate in 2012, about 40% of pregnancies worldwide (85 million pregnancies) were unintended. Approximately half of these unintended pregnancies ended in induced abortion, and the remaining resulted in mistimed/unwanted birth or miscarriage¹. There was significant variation in the rate of unintended pregnancies across the world's regions. For instance, the rate was as high as 108 per 1,000 women aged 15–44 years in Eastern and Middle Africa in 2012, but was very low in Western Europe (27 per 1,000 women). In addition, a study conducted to estimate the incidence and trend of induced abortion has revealed that the percentage of pregnancies ending in induced abortion declined in high-income countries (from 39% in 1990–94 to 28% in 2010–14), whereas in low-income countries it increased from 21% to 24%². This evidence highlights that more needs to be done to attain the SDG 2030 on reproductive health (RH) services in low-income countries, especially to address unmet need for contraception through comprehensive family planning service delivery strategies.

In areas where incidences of unintended pregnancy and abortion are very high and routine family planning services failed to reach all women who need contraception, post-abortion family planning service can play a significant role in addressing unmet need of contraception. In developing worlds, women with an unmet need for modern contraceptives account for 81% of unintended pregnancies, and most women undergoing abortion have either mistimed or unwanted pregnancies². Therefore, women who have received induced abortion and are at risk of another unwanted pregnancy represent an important group with unmet family planning needs. This implies that in addition to routine contraceptive service, all family planning programs should give enough attention to post-abortion contraception to address unmet need of women who had induced abortion for unintended pregnancies³. In countries where abortion is legal, post-abortion family planning is provided as part of comprehensive abortion care, and whereas in those countries where abortion is illegal, the service is provided as part of post-abortion care⁴. Additionally, given that women seeking abortion services are a group with demonstrated unmet need for family planning, appropriate counseling and provision of effective contraceptive methods, such as long-acting reversible contraception (LARC), significantly contributes to prevention of repeat unintended pregnancies and induced abortions^{5,6}.

In Ethiopia, though the contraceptive prevalence rate (CPR) among currently married women progressively increased in the past years reaching 35% in 2016, the unmet need remains high, at 22%. Interestingly, only 27% of women used intrauterine devices (IUDs) and implants, which are highly effective methods, whereas a larger proportion (73%) of women received less effective, short-acting contraception⁷. According to the 2014 abortion incidence study, the annual abortion rate was 28 per 1,000 women aged 15–49 years, an increase from 22 per 1,000 in 2008. About 77% of women accepted post-abortion

contraception, but the majority (68%) of them received short-acting contraceptives⁸. The low CPR and high unmet need, coupled with the increasing trend of induced abortion and complications, clearly signify the need for comprehensive family planning delivery strategies, such as provision of contraception counseling and service for all women seeking abortion care.

Recognizing huge service delivery gaps, Ipas (US-based international NGO) has been working with Ethiopian Ministry of Health and Regional Health Bureaus to reduce maternal mortality and disability by preventing unwanted pregnancy and unsafe abortion through provision of safe, comprehensive abortion and contraceptive services. The ultimate goal of the intervention presented here was to increase contraception uptake and improve contraceptive method mix, with special attention to LARC methods. This analysis seeks to compare contraceptive method choice patterns in the routine (interval) and post-abortion contraception services and to suggest how multifaceted service delivery approaches can help address unmet need for LARC methods.

Description of the intervention

Although Ipas Ethiopia has been implementing the intervention in five major regional states of the country, this report presents only the achievements and lessons learned in the Southern Nations, Nationalities, and Peoples' Region (SNNPR) of Ethiopia between fiscal year (FY) 2010 (July 2009 to June 2010) and FY 2017 (July 2016 to June 2017). During this eight-year project period, Ipas has provided supports to the SNNP Regional Health Bureau (RHB) working in five zones (Guraghe, Siltie, Kaffa, Bench Maji and Sheka zones), Yem Special Woreda and Hawassa city council to strengthen systems and expand access to quality comprehensive abortion care (CAC) and comprehensive contraceptive (CC) services for women, including young women. By the end of FY 2017, Ipas has been supporting a total of 127 health facilities (13 hospitals and 114 health centers) in the project sites. Under the above main project goal, Ipas and health system partners have designed and implemented problem-focused interventions to improve the delivery and quality of routine (interval) and post-abortion family planning services that are acceptable to all clients. As a first step, a rapid baseline situational assessment was carried out in 346 health facilities in four major regions (106, 31% of facilities from SNNPR) in order to identify service delivery gaps in both routine and post-abortion contraception, with more emphasis on availability and accessibility to long-acting and permanent methods⁹. Major findings of the assessment include:

- **Unavailability of LARCs and voluntary surgical contraception (VSC) services in most facilities.** In the SNNP region, only 30 (28%) facilities were providing implant contraceptives, and IUD was provided in 8 (7.5%) facilities only. With regard to VSC services, less than 2% of facilities were providing tubal ligation and no facility was providing vasectomy service during baseline assessment.

- **Lack of standard in-service training for service providers.** The regional health system has no standard manuals and approach for LARCs and VSC in-service clinical training, and only 50% of facilities in SNNP region have at least one provider trained on LARCs or VSC services. Though some facilities have trained providers, they were not providing the services due to lack of medical equipment and/or service delivery areas.
- **Inadequate integration of family planning service with maternal obstetrics events.** In Ethiopia, although post-abortion contraception is an essential element of abortion care, the baseline assessment revealed that about 47% of health centers were not providing the service. The most recent study also indicated that large proportion of abortion clients leave the facilities with short-acting contraception, and there is a paucity of evidence on quality of post-abortion contraception service, such as right-based approach in the delivery of the service⁶. Such missed-opportunity was observed in many other maternal and child health services, including ANC, delivery service, PNC, child immunization, and under-five health services
- **Unavailability of a wide range of contraceptive commodities and essential equipment.** Most facilities have stock out of one or more contraceptives during the baseline survey, and less than 25% of facilities had implant and IUD insertion and removal kits
- **Infrastructure related gaps.** Unavailability of appropriate/standard service delivery areas; lack of or faulty water and electrical power supplies; shortage of or poorly functioning latrines and waste disposal systems were observed in most facilities

Ipas intervention focused on service delivery and program management gaps identified during baseline assessment. Similar components of the intervention were implemented in both interval (routine) and post-abortion family planning services to improve method mix and increase contraception uptake. Key components of the intervention include:

- **Revision of national family planning guideline and development of competency-based training curricula.** As a first action to establish comprehensive family planning delivery system, Ipas, Federal Ministry of Health (MOH) and international RH partners worked in collaboration and updated the national family planning guideline and developed globally acceptable competency-based training curricula and training packages¹⁰.
- **Training of mid-level providers on both comprehensive abortion care and contraceptive services.** Offering voluntary contraceptive counseling and services at the same time and location where women receive facility-based abortion care requires service providers to have clinical skills on both abortion care and contraceptive services. The training for

mid-level providers focused on first-trimester abortion care and comprehensive contraceptive services, with emphasis to LARC methods¹⁰. Additionally, training centers established and training of trainers (ToTs) conducted for senior service providers on comprehensive abortion care and contraceptive services to strengthen the training capacity of the regional health system.

- **Supporting and encouraging service providers to integrate right-based approach (RBA) to the provision of contraceptive services.** Ipas strongly emphasize that women and girls should be empowered to understand and exercise their rights, voluntarily choosing their contraceptive methods, free of any coercion or incentives. To make the RBA practical in terms of service provision, all provider clinical training packages include sessions on sexual and reproductive health right (SRHR) and values clarification and attitude transformation (VCAT) to address provider bias¹¹. The training also reinforced through programmatic supports and clinical mentoring to service providers.
- **Improving availability of contraceptive commodities and related medical equipment and supplies.** Based on the specific needs identified in each facility, family planning commodities, equipment and supplies (such as LARC methods and insertion/removal kits) were regularly distributed to the facilities. Our intervention focused on availability of a wide range of contraceptives in both routine family planning and abortion care rooms¹⁰, which include seven modern contraceptives that classified into three groups: (i) short-acting reversible contraceptives (SARCs) including, oral contraceptive pills, injectables, and male condoms; (ii) long-acting reversible contraceptives (LARCs), including implants and IUDs and (iii) VSCs or permanent methods including, tubal ligation and vasectomy
- **Improving infrastructure and service setup.** After conducting a need assessment in collaboration with the health system, Ipas provided technical and financial assistance for renovation, expansion, and refurbishments of CAC/CC service delivery areas. The support included minor maintenance of the service area, separation of abortion room from other services, the establishment of client waiting area, and maintenance of water supply and waste disposal systems¹².
- **Establishing regular supervisory and program monitoring system.** The health systems in all levels were encouraged and supported to establish regular supervisory supports and program monitoring strategies to improve access and quality of family planning services

Methods

Routine service data collection

The intervention was implemented in public health facilities that provide both routine and Post-abortion family planning services in the southern region of Ethiopia (78 facilities in FY

2010 and FY 2011, 95 in FY 2012 and FY 2013, 101 in FY 2014, 110 in FY 2015 and FY 2016, and 127 in FY 2017). As part of program activities, service statistics on routine family planning and abortion care/post-abortion family planning were regularly collected from all intervention facilities. Two separate data collection tools were used to collect data from routine family planning logbook and abortion care logbook (the same logbook used to register abortion care and post-abortion contraception service data). During the first three fiscal years, data were collected quarterly; in subsequent years, semiannually. Government health system staff, along with Ipas program coordinators, were responsible for data collection, extracting information from routine family planning service and comprehensive abortion care logbooks using data collection tools developed for this purpose. Service data collected on routine family planning include new and repeated acceptors disaggregated by type of contraceptive methods and the number of removals for IUCD and implants. Data collected on abortion care and post-abortion contraceptive service include the type of abortion service, age, gestational age (trimesters), abortion procedure and the type of contraceptive used after abortion.

Program monitoring strategies

As part of routine program monitoring, Ipas regional team and government health system staff conducted regular integrated supportive supervision and regional review meetings. The supervisory visits were conducted on a quarterly base to monitor the delivery and quality of services and to identify solutions to bottlenecks. At the end of all supervisory visits, a series of consultative discussions were conducted with respective service providers and health facility directors to encourage best practices as well to mitigate the observed problems. The annual program review meeting is one of the recommended routine monitoring mechanisms, which offers the chance to partners (service providers, health facility directors, maternal health program officers/managers, and health department and bureau heads) to discuss progress towards the project goals and objectives. During the meetings, discussion held on latest service statistics, trends on service quality indicators, the observations made on service delivery activities, and the lessons learned and challenges to carry out the project activities. In addition, all facilities and respective district and zonal health offices used service data to review the progress and make evidence-based decisions to improve program achievements in the upcoming project period

Both routine and post-abortion family planning service data used in our analysis were collected for the purpose of monitoring program improvement, not for the purpose of conducting systematic research in a strictly defined model, so obtaining ethical approval was not appropriate¹³. All data collection, processing, and analysis were conducted according to international accepted ethical principles of maintaining privacy

and confidentiality of personal information of family planning and abortion/post-abortion contraception clients.

Data analysis and use

Service data were entered into a national Microsoft Excel database to conduct descriptive analysis, review trends, and monitor progress in both routine and post-abortion contraception services. The bivariate analysis used chi-square tests to examine the differences in method mix between routine and post-abortion family planning services. Statistical significance was established at $P < 0.05$. The analysis in this article explores only items related to contraception uptake and patterns of method use (method mix) in the routine and post-abortion family planning services.

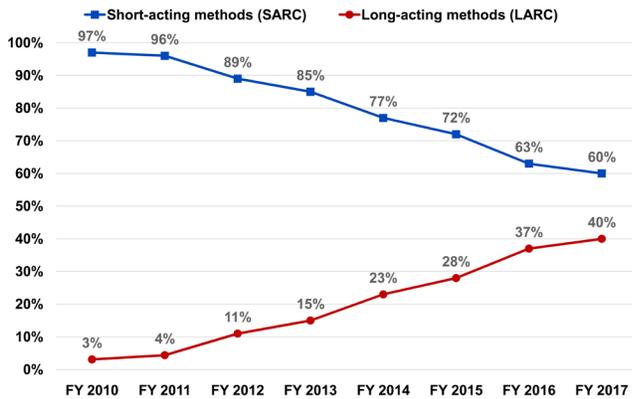
Results

Project background

During eight years of the project period (FY 2010 to FY 2017), a total of 864,303 family planning clients (new acceptors plus repeat acceptors) received modern contraceptive methods in routine (interval) contraceptive service in 127 intervention facilities. During the same project period, a total of 70,032 women sought abortion care in the same public health facilities in the project sites. Among all women who sought abortion care, 49,571 (71%) received safe and legal induced abortions; the remaining 20,461 (29%) women received post-abortion care for complications of unsafe abortions or complicated miscarriages. Based on the service data record, about 54,773 (78%) of abortion clients left the intervention facilities with some form of modern contraception. The proportion of post-abortion contraceptive acceptors progressively increased from FY 2010 to FY 2013, but an inconsistent trend in the proportion of acceptors was observed from FY 2014 to FY 2017.

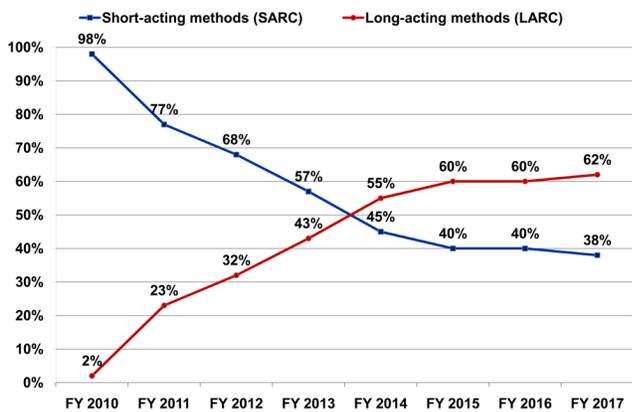
Changes in the choice of method: Routine versus post-abortion family planning services

During the intervention period, the contraception method mix progressively improved in both routine and post-abortion family planning services. Expanding contraceptive choice contributes to increased uptake of LARC methods over time. Trend analysis of method choice patterns revealed that the share of method mix for LARCs rose from 3% in FY 2010 to 40% in FY 2017 in routine family planning service (Figure 1), whereas in the post-abortion family planning service, the share for LARCs climbed from 2% in FY 2010 to 62% in FY 2017 (Figure 2). Comparing LARCs acceptance in the routine family planning service with that of post-abortion contraception service in the same facilities indicates that the rate of LARCs uptake among post-abortion family planning clients, averaging 62%, was much higher than in the same facilities' routine (interval) family planning program, where on average only 40% chose LARC methods ($P < 0.001$).



Abbreviations: SNNPR, Southern Nations, Nationalities, and Peoples' Region; FY, Fiscal Year

Figure 1. Trends in use of short-acting and long-acting methods among routine contraceptive acceptors by year, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, fiscal year (FY) 2010–17 (N=864,303).



Abbreviations: SNNPR, Southern Nations, Nationalities, and Peoples' Region; FY, Fiscal Year

Figure 2. Trends in use of short-acting and long-acting methods among post-abortion contraceptive acceptors by year, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, fiscal year (FY) 2010–17 (N=54,773).

LARC uptake significantly increased in post-abortion contraception

Trend analysis of LARCs uptake in post-abortion family planning revealed that implant use rose from 2% in 2010 to 54% in 2017, while the use of IUDs increased from 0.1% in 2010 to 9% in 2017. A similar trend analysis in routine family planning program revealed that the proportion of interval contraceptive users relying on implant rose from 3% to 35% over eight years of the project period, while the share of method mix accounted for by use of IUD rose from 0.07% to 5% over the same period, with slow increase compared to post-abortion contraception service. Moreover, the percentage distribution

of LARC acceptors by methods used showed that the proportion of clients opted for IUD (14%) was higher in post-abortion contraception than in routine family planning service, where only 11% of clients used the IUD. Figure 3 and Figure 4 illustrate and compare the method mix in routine family planning with post-abortion contraception. Uptake of LARCs was significantly improved in post-abortion contraception as compared to routine family planning. The percentage of women (couples) choosing short-acting methods were progressively declined and very few numbers of women have chosen the permanent method (tubal ligation) in both types of family planning the services.

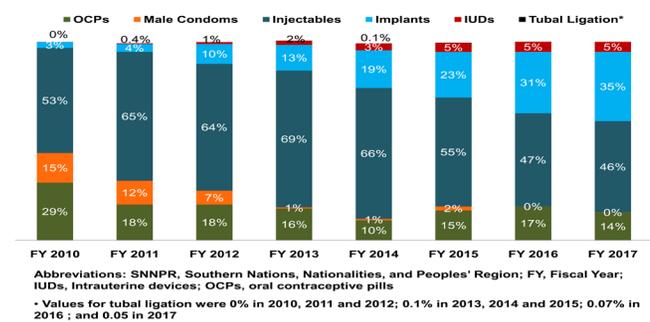


Figure 3. Trends in the method mix among routine contraceptive acceptors by year, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, fiscal year (FY) 2010–17, (N=864,303). *Values for tubal ligation were 0% in 2010, 2011 and 2012; 0.1% in 2013, 2014 and 2015; 0.07% in 2016; and 0.05 in 2017. IUDs, intrauterine devices; OCPs, oral contraceptive pills.

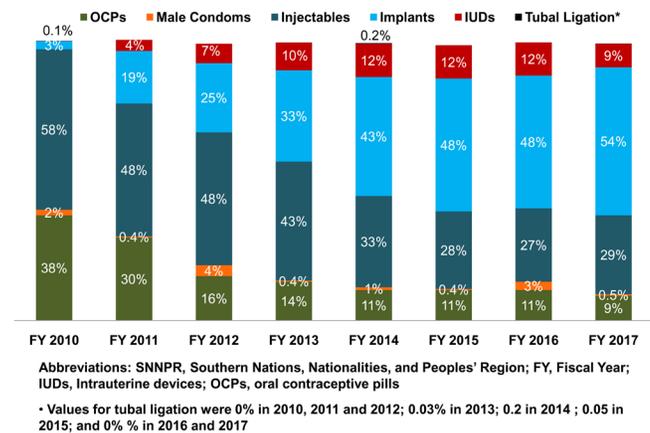


Figure 4. Trends in the Method Mix Among Post-abortion Contraception Acceptors by Year, Southern Nations, Nationalities, and Peoples' Region, Ethiopia, fiscal year (FY) 2010–17, (N=54,773). *Values for tubal ligation were 0% in 2010, 2011 and 2012; 0.03% in 2013; 0.2 in 2014; 0.05 in 2015; and 0% in 2016 and 2017. IUDs, intrauterine devices; OCPs, oral contraceptive pills.

Discussion

Ipas, in collaboration with its partners, has implemented result-based and targeted interventions that significantly contributed to stronger post-abortion and routine (interval) family planning services. The successes of Ipas program intervention attributed to availability of a wide range of contraceptive methods, essential medical equipment and supplies; improvement of infrastructure; decentralization of the services and integration of abortion care and family planning services through training of mid-level providers (midwives, nurses and health officers) on comprehensive abortion care (CAC) and contraceptive services.

Studies have shown that access to a wide range of contraceptive methods, with the rights-based approach to informed consent and decision making, may contribute to the improvement of contraceptive prevalence rate. Though it is not a definitive indicator, a skewed method mix is a good signal of a limited range of available methods or service provider bias. In other instances, it may reflect cultural preferences or effect of national population policy of the country^{14–16}. However, it should be emphasized that improving contraceptive method mix does not mean balancing the method mix, with equal use of all available methods. Rather, it requires moving away from an obviously distorted method use patterns, without specifying precisely how fully balanced the mix should be, while expanding access to a wider variety of method choices, including new modern methods and underutilized effective contraceptives^{17,18}. This highlights that in addition to the CPR and unmet needs, change in contraceptive method mix (diversity of contraceptive methods used) is an important indicator of progress in family planning programs^{16,19}.

A strong family planning program, particularly in low-income countries, requires the implementation of effective service delivery strategies, such as the integration of family planning services with other maternal and child health services and offering methods tailored to the needs of users. Ipas and MOH partners have implemented various interventions to integrate abortion care with family planning service, which significantly contributed to the progressive improvement of post-abortion contraception acceptance. More importantly, the proportion of women who used LARC methods significantly increased in post-abortion service as compared to routine program (62% versus 40%) even though similar interventions were implemented in both service delivery programs. A number of studies and reports of program interventions indicate that such innovative strategies could help broadening the method mix and expanding contraceptive choice, letting women and couples choose the method that suits them best and change methods as their circumstances and need change^{17,20,21}. Programmatic interventions that contributed to effective integration of abortion care and contraception services were training of service providers on both abortion care and contraceptive services (with a focus on IUDs and implants), improving service setup and regular supply of wide range of contraceptive commodities and essential equipment to abortion room so that both abortion care and post-abortion contraception provided in the same place. Studies from various settings have shown that similar

components of interventions implemented to strengthen the integration of abortion care and post-abortion contraception have significantly improved the uptake of contraception after abortion, with the number of women adopting effective long-acting methods increasing after the intervention^{20,22,23}.

Decentralization of the services, and task-shift in first-trimester abortion care and LARC services are also important interventions that contributed to our program successes and achievements. In Ethiopia, some serious challenges persisted despite the change in abortion law in 2005 to expand the indications under which abortion is allowed. Unavailability of trained mid-level providers in primary health care facilities and lack of facility-preparedness in terms of physical space, supplies, and equipment were the major challenges and obstacles to expanding the service to low-level facilities^{8,10}. Ipas, in collaboration with the government health system, has conducted cascade of clinical training on first-trimester abortion care and LARCs service for mid-level service providers (midwives, clinical nurses, health officers) which helped transferring tasks from high-level providers (gynecologists and general practitioners) to mid-level providers. Training of a large number of mid-level providers working in primary health care facilities and renovation and refurbishment of abortion/post-abortion family planning and routine family planning service areas were used as strategies to decentralize the services from few high-level facilities (secondary/tertiary levels) to accessible low-level facilities. Similar successful strategies were implemented in various parts of the world to decentralize abortion care and family planning services to low-level health facilities, which improved availability and accessibility of alternative methods and subsequently increased uptake of effective contraceptives, such as LARC methods^{20,21,24}.

Limitations of the study

Despite this intervention study revealing evidence for public health field to improve uptake of effective contraceptive methods and prevent maternal deaths and disabilities that resulted from unintended pregnancy and unsafe abortion, it suffers some limitations that are largely due to reasons related to program intervention. For instance, we could not conduct further analysis to investigate other factors that might contribute to method use patterns, since the tools used to collect family planning service data from the facilities do not capture socio-demographic and reproductive characteristics of both the routine and post-abortion contraceptive acceptors. This study presents contraceptive use patterns at the facility level, and no follow-up was done to investigate the continuation rate and method use patterns after the women left the facilities. Moreover, since our findings in this report are based on an intervention implemented in limited geographic areas and facilities, it may not be generalized to all facilities in the region or in the country.

Program implications and conclusion

In Ethiopia, as throughout the developing worlds, family planning remains an unfinished agenda. High unmet need contributes to a high fertility rate and uncontrolled population growth that adversely affects the economic development of the

country. The current national family planning program in Ethiopia exclusively focuses on routine (interval) contraception service delivery, and no attention is given to increase access to quality contraceptive services after obstetric events and reduce the unmet need for family planning²⁵. Since evidence has shown that fertility may return as early as eight days after the completion of a first-trimester induced abortion, it is imperative that women are offered effective methods of contraception immediately after an abortion²⁶.

In Ipas intervention sites, one of the factors for a low level of CPR is a skewed method mix, with one or two methods (injectables and oral contraceptive pills) covers nearly three-fourths of all contraception use⁶. Our operation study has revealed that when the current mix is augmented by access to additional methods, choice of method expands and total contraceptive use tends to rise, with more women adopting effective methods. Integration of family planning with other maternal health services and offering wide-range of contraceptive methods can help the service to reach clients with a variety of needs, a key factor for a higher uptake of LARC methods by abortion clients in Ipas intervention sites. Multiple studies have shown that a comprehensive approach to family planning services may lead to an increase in the use of more effective contraceptive methods and user compliance among women or couples seeking services^{17,20,27}. Utilization of VSCs was very low in the intervention facilities, which could be due to lack of knowledge and misconception about permanent methods. A community-based study conducted in the northern part of the country revealed that significant number of married women had inadequate knowledge on permanent contraceptives, and more than half of the study participants had a negative attitude towards practicing of these methods²⁸.

Ipas and its partners have implemented similar intervention components in both routine family planning programs and post-abortion contraception services to expand contraceptive choice and improve uptake of effective methods, such as LARC methods. However, comparative trend analysis indicated that improvement in method mix and uptake of LARC methods were much better in post-abortion contraception service as compared to routine family planning program. This might be due to longer interactions between providers and clients, better counseling services, and high unmet to LARC methods among abortion clients as compared to routine program users. However, since evidence of the most acceptable method mix for post-abortion clients is scarce, more health systems research is needed to assess factors influencing women method preference in post-abortion contraception. Additionally, future research should investigate the integration of family planning with other

services in more detail from the perspectives of service providers and clients and assess the cost-effectiveness of integration.

In conclusion, the intervention implemented in Southern region of the county can provide valuable lessons to other regions and countries, which do not require intensive resource inputs; and it can be replicable in any other family planning service delivery approaches, such as postpartum family planning services.

Data availability

Access to the data is restricted to protect the identities of those accessing services. Those wishing to access the data must confirm that:

1. Use of the data will enhance existing knowledge about abortion/FP and abortion/FP programs.
2. The requestor has the ability to conduct confidential and high-quality analysis.
3. Timing of the request allows for preparation and processing of a data use agreement and transmission of the dataset(s);
4. The requestor recognizes the importance of appropriate acknowledgement of Ipas; and
5. The proposed publication(s) will contribute to Ipas's mission.

To apply for access to the data, please contact the first author (samuelm@ipas.org). If the request is approved, the Associate Director of Program Evidence or their assigned delegate will create a Data Use Agreement that includes all components outlined in the global Data Use Agreement Template. Signatures of the relevant Ipas approvers and a representative of the relevant authority from the requestor should be obtained on the agreement.

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The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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Karen Hardee 

Hardee Associates, Arlington, VA, USA

This article addresses an important topic – expanding access to a range of contraceptive methods to expand choice. The purpose of the article should be clarified – is it comparing post-abortion to regular FP services? Promoting LARC use? Increasing CPR or mCPR? The authors seem to pitch it as expanding access to contraception by making more methods available in both regular and post-abortion services, but then they focus on LARC use. And what was the purpose of comparing uptake in post-abortion and regular FP services? Wasn't the point to make contraceptives more available in both?

The authors say that the intervention was rights-based and that clients were told equally about all methods, with no provider bias towards any method. But the authors have shown their own clear bias that women – particularly after abortion – should be using LARCs. Also, the reference for the intervention being rights-based is #11, which is MOH guidelines for abortion rather than rights-based training on FP for providers. The authors further note that the training was reinforced through programmatic supports and clinical mentoring to service providers. What were those programmatic supports and clinical mentoring and how did they support rights? There is not a lot written on rights-based FP – and how to implement it – so adding more information on what made this intervention rights-based would be helpful for the field.

The authors note that the increase in LARCs was higher in post-abortion services than in regular services, but they also say that their data can only show the trends in method use but not the reasons for the differences. The reader is left wondering if women who access contraception post-abortion are more motivated than those who get methods from regular family planning services to use more effective methods, or if maybe there was more motivation by providers in post-abortion settings to promote use of those methods.

The title of the paper starts with “Expanding contraceptive choice...” The word “choice” is loaded – does it mean clients have more methods to choose from or that they have more agency to make their own choices. The authors should explain what they mean by choice. Especially since the authors note that: “The ultimate goal of the intervention presented here was to increase

contraception uptake and improve contraceptive method mix, with special attention to LARC methods." Where does an individual's choice fit into this?

The authors further note: "This analysis seeks to compare contraceptive method choice patterns in the routine (interval) and post-abortion contraception services and to suggest how multifaceted service delivery approaches can help address unmet need for LARC methods." The authors need to explain what they mean by "unmet need for LARC methods." Unmet need for family planning is defined as "Women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child"

https://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en/). Nowhere in this definition is there any specificity of what method a women would have an unmet need for.

In the introduction, the authors site Benson *et al.* 2015 to make the point that "appropriate counseling and provision of effective contraceptive methods, such as long-acting reversible contraception (LARC), significantly contributes to prevention of repeat unintended pregnancies and induced abortion."

Yet that is not the point Bensen *et al.* made. From their article that analyzed postabortion FP uptake across several countries: "Uptake of long-acting, reversible contraception was low in most countries. These findings demonstrate high contraceptive uptake when it is delivered at the time of the abortion, a wide range of contraceptive commodities is available, and ongoing monitoring of services occurs. Improving availability of long-acting contraception, strengthening services in hospitals, and increasing access for young women are areas for improvement."

The authors characterize the study as operations research, but it relies on routine service statistics, without any additional data collection to help explain the findings. I suggest calling it a programmatic assessment, or something other than a study.

The conclusion mentions that this intervention was an example of something that did "not require intensive resource inputs," yet no information is provided on how much the intervention cost of what other resource requirements there were to implement it.

The article needs editing for English language: Here are just some examples from throughout the paper:

Ipas implemented problem-focused intervention [should be: "implemented a problem-focused..."] "In developing worlds [should be: "In the developing world"], women with an unmet need for modern contraceptives account for 81% of unintended pregnancies, and most women undergoing abortion have either mistimed or unwanted pregnancies²"

"Recognizing huge service delivery gaps, Ipas ([add: a] US-based international NGO) has been working with [add: the] Ethiopian Ministry of Health and Regional Health Bureaus to reduce maternal mortality and disability by preventing unwanted pregnancy and unsafe abortion through provision of safe, comprehensive abortion and contraceptive services."

The ultimate goal of the intervention presented here was to increase contraception [should be contraceptive] uptake and improve contraceptive method mix, with special attention to LARC

methods.

During this eight-year project period, Ipas has provided supports [should be: support] to the SNNP Regional Health Bureau (RHB)...

Rather, it requires moving away from an obviously distorted method use patterns [should be pattern],

The training [add: was] also reinforced through programmatic supports and clinical mentoring to service providers.

There are many more instances of words and sentences that need editing.

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?

Partly

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

Yes

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

Partly

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Rights-based FP, SRHR, gender, ASRH, resilience and environmental stressors, male engagement

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.

Reviewer Report 03 July 2020

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**Yohannes Dibaba Wado**

African Population and Health Research Centre, Nairobi, Kenya

Overview

The manuscript address an important reproductive health challenge in Ethiopia - low contraceptive prevalence, high unmet need, and skewed method mix - and can contribute to the evidence needed to influence policies and programs on family planning. They used routine data collected by an NGO called Ipas to show that method mix is improving in both postabortion services and in standalone family planning programs due to the interventions by Ipas and the Ministry of Health. However, the following issues need to be addressed.

Major Comments:

1. There is a significant overlap with a manuscript previously published by the lead author earlier on *Global Health Science and Practice*, (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4990163/pdf/S60.pdf>)¹ entitled ' Strengthening Postabortion Family Planning Services in Ethiopia: Expanding Contraceptive Choice and Improving Access to Long-Acting Reversible Contraception'. Contents in many sections are similar which should be avoided or referenced as appropriate.
2. Given the significant overlap with the published paper stated in #1, authors should clearly illustrate what new findings have been added and what new or different policies or program implications identified.
3. Many of the literature and data used are too old. For instance, reference 1 (Intended and unintended pregnancies worldwide in 2012 and recent trends) has been updated several times since this publication. Authors should update many of these with up to date literature and data.

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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?

Yes

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

Yes

Are all the source data underlying the results available to ensure full reproducibility?

No

Are the conclusions drawn adequately supported by the results?

Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Sexual and reproductive health, public health policies and programs

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.

Reviewer Report 18 November 2019

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Ana Luiza Vilela Borges 

Department of Public Health Nursing, University of São Paulo School of Nursing, São Paulo, Brazil

The paper is relevant and will certainly be helpful to low- and middle-income countries that face the challenge to improve contraceptive uptake. I am sure that if authors can respond to some of the questions/doubts raised here, the quality of paper will be improved.

I would start with the Title, which is too long and does not reflect the real object of the paper. I suggest something like “Expanding contraceptive choice in Ethiopia through an intervention focused on training, service integration and contraceptive supply”.

The Abstract also needs to be clearer about what intervention was done. The sentence “the intervention focused on service delivery and program management gaps identified during the baseline assessment. Service data regularly collected from intervention facilities and entered into a Microsoft Excel database to conduct descriptive analysis, review trends, and monitor progress” may be replaced by a text that explains what the intervention was consisted of. The conclusion can be the lessons learned with the Intervention.

In the Introduction section, it is important to give a brief context of abortion and post-abortion care in the country, including legislation about induced abortion. This is important so readers can understand at what level the findings may be compared to other contexts. I suggest the authors also present the country unintended pregnancy rates. In the last paragraph of this section, the authors say that “recognizing huge service delivery gaps...”, but these gaps are not described.

The intervention is well described, but there are some abbreviations that are hard to guess the meaning. Also, the authors can be more precise to describe how the intervention approached the

services integration, especially some more details on the role of primary health care services.

In the Methods, it is important to describe how health facilities organize their services in the region. It is clear they offer both routine and post-abortion family planning services, but it is not clear if they are at primary health care or secondary health care level, or a mix of both. A good description of them at this section is welcomed (maybe a separate analysis by the type of facility would also be recommended).

As the data were collected for monitoring program improvement, should this study be considered a secondary data analysis? Or a case study? Anyway, it must be clear that an ethical approval was not appropriate but someone/some institution had to authorize the use of data for research purpose, which is the case of this paper. Please describe this appropriately.

From the Discussion section, I feel that the authors should explore more how the intervention is sustainable over the next years and how this could be replicated in other low- and middle-income countries, considering different legislations on abortion and the support of IPAS, that is not a reality for many, instead of trying to make the case as this was an innovative intervention. Also, is the intervention compared to any other in the literature? Why do the authors focus on task-shifting if this is not even mentioned as part of the intervention?

I would suggest reducing the section Program implication and Conclusions. This can be achieved by focusing on how other contexts can beneficiate from these findings and the lessons learned with the Intervention.

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

Yes

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

Partly

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

No

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

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Partly

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Sexual and reproductive 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.
