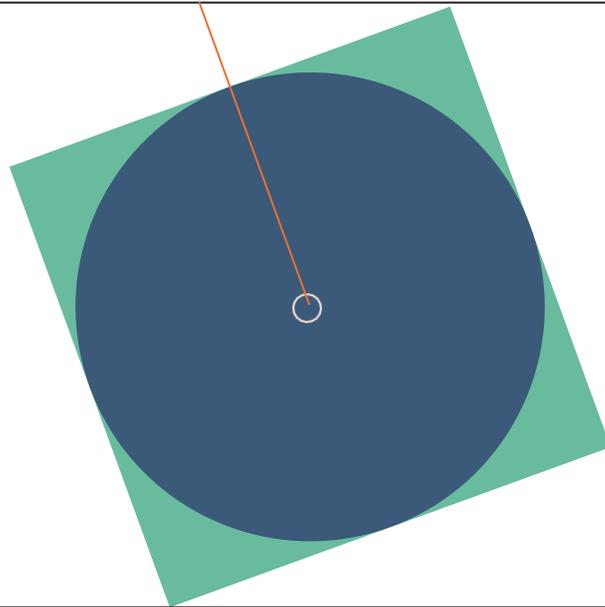


Potential interventions to improve the use of long-acting reversible contraceptives and permanent methods in Bangladesh



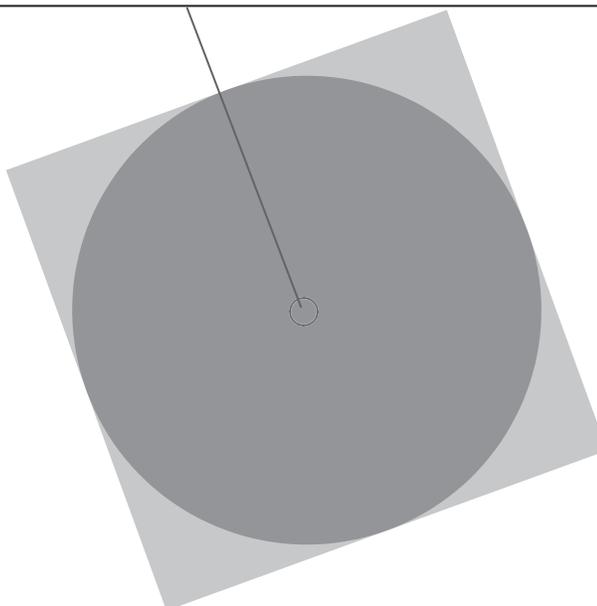
Potential interventions to improve the use of long-acting reversible contraceptives and permanent methods in Bangladesh

Data for Impact (D4I)

University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, North Carolina 27516 USA
Phone: 919-445-9350 | Fax: 919-445-9353
D4I@unc.edu
www.data4impactproject.org

icddr,b

68, Shaheed Tajuddin Ahmed Sarani
Mohakhali, Dhaka 1212, Bangladesh
Phone: +880 (0)2-982-7001 to 10
Fax: (+88 02) 9827075, 9827077
rdm.icddr.org
www.icddr.org



Mizanur Rahman, D4I, University of North Carolina at Chapel Hill

M. Moinuddin Haider, Research for Decision Makers, icddr,b

Siân Curtis, D4I, University of North Carolina at Chapel Hill

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Background

Bangladesh has done exceedingly well in family planning (FP) and achieved a total fertility rate (TFR) of 2.3 births per woman, nearly a replacement-level fertility, with a contraceptive prevalence rate (CPR) among married women of reproductive age of around 62 percent in 2017 (NIPORT, et al., 2019). One central programmatic concern is the consistently low use (9%) of long-acting reversible contraceptives (LARC), which are IUDs and implants, and permanent methods (PM), which are tubal ligation and no-scalpel vasectomy (NSV). Most couples—those who want to space births and those who want to limit pregnancies—rely on short-term methods, namely pills (28% in 2014 and 25% in 2017-2018), injectables (12% in 2014 and 11% in 2017-2018), condoms (6% in 2014 and 7% in 2017-2018), and traditional methods (8% in 2014 and 10% in 2017-2018) (NIPORT, et al., 2016; NIPORT, et al., 2019).

In this policy brief we argue that shifting the method mix towards LARC and PM, even without increasing CPR, would lead to a total fertility rate (TFR) of 2.0 or below per woman and would reduce the incidence of abortion that can result in reduced maternal morbidities and mortality. The recent remarkable increase in facility delivery (currently at 50%; NIPORT, et al., 2019) offers an opportunity for providing postpartum IUDs, implants, and tubal ligation (PPIITL) at the delivery table. To increase the uptake of LARC and PM, we suggest that several potential interventions are indicated—the realization of which would require meaningful engagement from both public and private health sectors.

Why is the low use of LARC and PM a concern in Bangladesh?

About two-thirds of women of reproductive age in Bangladesh do not want more children. But most of them, as mentioned above, rely on short-term methods. Condoms and traditional methods (17% prevalence in 2017-2018; NIPORT, et al., 2019) have high failure rates; pills (25% prevalence) have high discontinuation and failure; and injectables (11%) have high discontinuation rates. Couples also frequently switch from one short-acting method to another and many unintended pregnancies occur during these switches (Curtis, et. al., 2011). These unintended pregnancies lead to a high level of unwanted fertility and abortion.

- Unwanted fertility—there are 0.6 unwanted births per woman in Bangladesh. The unwanted fertility rate is the difference between TFR, which is 2.3, and total wanted fertility rate (TWFR), which is 1.7 [TFR (2.3) – TWFR (1.7)]. If unwanted fertility can be reduced by half, TFR in Bangladesh could go down to 2.0—achieving the 2022 fertility goal of the National Health, Population, and Nutrition Sector Program (HPNSP).
- High levels of menstrual regulation (MR) and abortion—there were an estimated 1.6 million MRs/abortions in 2014 (Singh, et. al., 2017). From a financial point of view, women spend about 800 million Bangladeshi Takas on MRs and abortions annually. Unsafe MR and abortion can lead to short- and long-term morbidities and contribute to a high level of maternal mortality (NIPORT, et. al., 2019b).
- A quarter-million post-abortion cases with complications were treated at facilities in 2014 (Singh, et. al., 2017)—an avoidable burden to the health systems. Moreover, the treatment of post-abortion complications costs about 250 million Bangladeshi Takas nationally per year.

Increased use of LARC and PM, which are highly effective methods for limiting fertility with generally low discontinuation rates, can help reduce unwanted pregnancies and avoid the high costs of MR, abortions, and associated complications.

Moreover, family planning programs are likely to be more efficient when couples use LARC and PM because programs do not have to deal repeatedly with the same client. From the client perspective, LARC and PM are more effective and less bothersome than adhering to short-acting methods.

What are the reasons for the low use of LARC and PM in Bangladesh?

Both supply- and demand-side barriers are responsible for the low use of LARC and PM.

The supply side barriers exist because the public sector is the primary agency that delivers LARC and PM but commonly experiences a high level of provider vacancy, poor facility readiness, and poor quality of care. The government has opened the provision of LARC and PM to the private sector but progress in engaging that sector has been slow. Shortage in supplies of equipment and medications is common in the delivery system (Haider, et. al., 2019).

Another supply-side barrier is that facilities that provide delivery services have not yet adopted the provision of postpartum LARC and tubal ligation. About 1.5 million births occur in facilities each year (0.5 million in public facilities operated by the Directorate General of Health Services [DGHS] and 1 million in private facilities). A conservative estimate suggests that if both of these types of birthing facilities implemented a carefully designed program of postpartum provision of LARC and PM, that would add about half a million PPIITLs annually in Bangladesh. The additional amount would greatly boost the current three-quarters of a million LARC and PM procedures provided by the health system through the Directorate General of Family Planning (DGFP) program (DGFP 2020).

The barriers on the demand side include stigma and cultural norms. Rarely do educated or high-wealth couples use LARC or PM (Khan and Rahman, 1997; NIPORT, et. al., 2016). Numerous myths and misconceptions exist against these methods and result in low demand. Further, even though discontinuation of LARC is generally lower than that of other reversible methods, one-half to two-thirds of LARC discontinuations are due to undesirable side effects (Mahboob-E-Alam, 2009; NIPORT, et. al., 2013; Uddin, et. al., 2020). Appropriate counseling and provider follow-up of LARC and PM clients occur infrequently in the DGFP service delivery system (Uddin, et. al., 2020a).

Why is the use of pills and injectables high in Bangladesh?

Convenience and privacy are main drivers for the use of short-term methods. The widespread availability of pills in pharmacies and convenience shops close to clients and open morning to late night is a great convenience. Injectables are also now available at selected pharmacies in addition to health centers. In contrast, IUDs and implants are dependent on available providers and are only available at health centers, requiring an appointment and sometimes a wait. The clients need to return to the clinic to discontinue these methods. Many clients have concerns about client confidentiality in receiving and discontinuing LARC—issues not associated with pills and injectables. And LARCs and PMs are invasive procedures, and thus are less acceptable (Uddin and Ara, 2013).

How many unintended pregnancies and abortions/MRs result from pill failure?

Although pills are 99.8 percent clinically effective, the World Health Organization (WHO)-supported “Family Planning: A Global Handbook for Providers” reports that about 8 percent of users are likely to conceive using the method during 12 months of continued typical use (WHO and CCP, 2011). The pill failure rate over the first 12 months of use, based on longitudinal data, was 12 percent in Matlab, Bangladesh, in the 1990s (Bairagi and Rahman, 1996). The 1997 Bangladesh Demographic and Health Surveys (BDHS) reported a 12-month failure rate of only 2.9 percent, which probably indicates an underreporting of failure (Mitra, et. al., 1997). Subsequent BDHS reports showed slightly higher pill failure rates (4.9% in 2014 and 4.5% in 2017-2018) (NIPORT, et. al., 2016, 2019a). Assuming an annual pill failure rate of 4.5 percent, a rough estimate is that 436,000 women in Bangladesh who were using pills

Annually, an estimated 430,000 women in Bangladesh become pregnant while using the pill. Many of these unintended pregnancies could be avoided with more use of LARC or PM methods.

became unintentionally pregnant in 2017 (See Note 1, p9). Estimates from Singh, et. al. (2017) indicate that 58 percent of unintended pregnancies ended in abortion or MR in Bangladesh in 2014. Applying this number to unintended pregnancies resulting from pill failure implies that about a quarter-million MRs/abortions (or eight percent of all births [3.2 m]) took place due to pill failures alone.

How often do women using short-acting methods stop using because of problems with the method?

About 11 percent of pill users and about 20 percent of injectable users discontinue their methods within 12 months due to side effects and health concerns (NIPORT, et. al., 2019a). Further, 1 percent of pill users, 1.6 percent of injectables users, and 10.3 percent of condom users stop using their method within 12 months due to other problems with the method such as access, cost, or inconvenience of use. Using these method and reason-specific discontinuation rates as annual rates and applying them to the estimated population of women of reproductive age using each method implies that there were about 445,000 pill, injectable, and condom discontinuers in 2017 due to lack of access or inconvenience of use (See Note 2, p9). Moreover, 29 percent of pill users, 15 percent of injectable users, and 24 percent of condom users stop using their method within 12 months and do not switch to another method when they stop using. Users of short-acting methods and LARCs should be counseled that they are at risk of pregnancy immediately after the discontinuation of any method.

Couples should be aware of the relative risks of method failure of short-acting methods and LARCs, and the risks of frequent method discontinuation and switching as these can lead to unwanted pregnancies. Full information about the failure risks of different methods can address common misconceptions about different methods and increase consideration of LARC and PM.

Potential interventions for increasing use of LARC and PM

Potential interventions to increase use of LARC and PM can be grouped into three categories: Systems strengthening, behavior change communication (BCC), and PPIITL.

System strengthening

System strengthening interventions are overdue in the public sector in Bangladesh. These interventions include minimizing provider vacancies and improving facility readiness to provide LARC and PM.

Behavior change communication

Mass media/FP messages

BCC activities for reaching couples with FP information or messages can help them choose a method best suited to their spacing and limiting needs. Most FP information and messages can be provided through mass media (TV, radio, billboard, poster, newspaper) and/or community-based FP workers through one-on-one contacts with potential clients. Leaflets on FP methods distributed through providers is another effective BCC route. However, DGFP seriously lacks in these BCC initiatives. For example, only one in four women report that they saw, heard, or read a FP message on mass media and one woman in five reports that she was contacted by an FP worker in recent months (NIPORT & ICF, 2020). In contrast, exposure to FP messages through mass media is widespread in India, a Bangladesh neighbor—about three of four Indian women report that they have seen, heard, or read a FP message in recent months (IIPS & ICF, 2017). Use of FP leaflets is rare in the Bangladesh DGFP systems (Uddin, et al., 2020b).

Counseling couples in a segmented client approach

Couple-specific counseling should be pursued to ensure that couples are empowered to make an informed choice from the full range of contraceptive options available in the context of their specific situation and fertility goals. This tailored counseling was shown in a small-scale experiment in two upazilas to increase the use of both LARC and PM and the use of short-acting methods (icddr,b, 2016). This approach addresses information and access barriers to consideration of LARC and PM by providing a full understanding of their potential benefits for achieving a desired family size and providing information on where to access these more effective methods. Counseling also encourages any couple not using a contraceptive method to consider adopting a method.

Alerting pill, injectable, and condom users about the risks of unintended pregnancies associated with method failure, early method discontinuation, and interruptions in method availability

Counseling should address the limitations of short-acting methods so couples can make a fully informed choice for their situation: the pill may fail; pill, injectable, and condom are often discontinued early due to side effects and other reasons; and these methods require regular resupply which can affect continuation if supplies are not available when needed. All these may result in unintended pregnancies.

Providing postpartum IUDs, implants, and tubal ligation

Immediate postpartum provision of a contraceptive method would add greatly to the contraceptive method mix offered in Bangladesh. Couples who want to space births and those who want to limit fertility can benefit from PPIITL. Bairagi and Rahman (1996) showed that as many as 20 percent of postpartum women who do not use a contraceptive method become pregnant by six months after childbirth. The fact that more than 10 percent of births occur within two years of a previous birth in Bangladesh is an indicator that contraceptive methods were not used or that less-effective methods were used (such as condoms or traditional methods).

Options exist for all postpartum mothers. For example, breastfeeding is common in Bangladesh and DGFP guidelines advise breastfeeding women to start using combined pills six months postpartum or injectables as soon as six weeks after birth (DGFP, 2017). Postpartum IUDs and implants can be used immediately after delivery whether for birth spacing or limitation. And, for those wanting to limit fertility, the most effective method—postpartum tubal ligation—can be provided on the day of delivery of the last child, thus almost eliminating any chance of future pregnancy.

Enhancing PPIITL service delivery

The recent substantial increase of births in health facilities in Bangladesh (currently 50% of all births, NIPORT, 2019a) provides new opportunities to offer IUD, implant, and tubectomy at the delivery table. However, two-thirds of facility deliveries take place in private hospitals or clinics (NIPORT, et. al., 2019b) so it will be important to include private sector delivery facilities in PPFPP service delivery systems. About half a million deliveries take place annually in upazila health complexes (UHC), maternal and child welfare centers (MCWC), district hospitals (DH), and medical colleges, and another million deliveries occur in private hospitals and clinics. Carefully designed interventions and their efficient implementation can offer PPIITLs to all of these women.

Counseling ANC clients on postpartum contraceptive options

Currently, there are no organized interventions to counsel pregnant women on planning their next pregnancy. During ANC visits to providers (obstetrician-gynecologists, physicians, nurses, midwives, or paramedics), pregnant women

If every woman delivering at facilities were offered one of the PPIITLs, we estimate about 345,000 IUDs, implants, and tubal ligations could be provided annually—that is equal to 46 percent of the total DGFP provision of LARC and PM (about 750,000) in 2017 (Rahman, et al., 2020), increasing it to about 1.1 million.

should be given information on postpartum contraceptive options, including postpartum IUD, implant, and tubectomy. Women should be counselled to discuss these options with their family if they want to involve them and should be advised to provide consent for the method well ahead of the procedure if they wish to have a method at delivery. If they wait until delivery they may not be able to provide consent.

Model to develop PPIITL interventions

Supply improvement

- *Engage DGHS facilities and providers in providing PPIITL.* A large pool of obstetricians, gynecologists, medical doctors, midwives, and nurses in DGHS provide health services in Bangladesh. They are skilled and widely available for providing LARCs and PMs but they currently do not as it is thought that these services are provided by DGFP.
 - In 2019, the director generals of both DGHS and DGFP published a paper instructing public medical college hospitals, specialized hospitals, district hospitals, and Upazila Health Complexes (UHCs) on the provision of PPIITL (DGFP, 2019a). The paper specifies guidelines and service provision processes—including funds, logistics, and supplies needed. However, an implementation research study in one district observed that implementation of this initiative would require active engagement by the government to be successful (Uddin, et. al., 2020b).
 - The DGHS facilities have a high rate of provider vacancy, which has been a longstanding problem and should be solved.
 - Facility readiness to provide LARC and PM is poor. This could be substantially improved by enhancing the supply chain system to ensure required equipment and supplies are in place.
 - The flow of funds to reimburse clients' wage compensation, transportation, food allowances, and provider fees should remain smooth, from DGFP to the DGHS and other facilities. Obstacles that clients and providers face to receiving allowances and fees are negatively affecting LARC and PM uptake.
- *Engage the private sector in providing PPIITL.* Private sector obstetricians-gynecologists who provide childbirth and delivery services can efficiently perform PPIITL.
 - A recent paper from DGFP, similar to the one for public-sector facilities and providers mentioned above, instructed private-sector hospitals and clinics to provide PPIITL (DGFP, 2019b). The paper provided guidelines and processes for funds, supplies, and logistics.
 - The PPIITL provision in private-sector facilities has not yet started effectively. An implementation research project could help meaningful operationalization of this initiative.
 - Provider training and facility readiness to provide PPIITL need to be improved in the private sector.
 - DGFP should develop an effective mechanism for supplies and reimbursements by engaging the local medical officers (maternal and child health).

Enabling environment

- Strengthen policy directions
 - DGFP and DGHS should work together to define roles and responsibilities of serving the PPF needs of women who deliver at facilities.
 - The Obstetrical and Gynecological Society of Bangladesh (OGSB) and the association of private-sector hospitals/clinics should be engaged to support the PPIITL initiative.

Demand creation

- Design and implement effective BCC strategies and activities to increase awareness of PPIITL
 - *What information is needed?* Women should be told that IUDs, implants, and tubal ligation are available immediately after childbirth at facilities and that these methods greatly reduce the risk of early and unintended pregnancy without interrupting breastfeeding. Thus, these methods reduce abortion, fertility, and child and maternal mortality.
 - *When to provide it?* ANC visits are the time to counsel pregnant women so they can make an informed method choice based on their subsequent spacing and limitation needs. More than 80 percent of pregnant women receive ANC—70 percent of them from qualified doctors who are likely to be from the private sector.

- *How to provide the information?* Physicians' and OB/GYNs' counselors can help pregnant women to decide about postpartum contraception before delivery. Other ANC providers can counsel pregnant women who choose IUDs, implants, and tubal ligation. Printed information about IUDs, implants, and tubal ligation can be given to pregnant women during ANC visits along with advice to talk with their spouse and relatives and decide if they want to adopt a contraceptive method at delivery.

Note 1 on the estimation of the number of unintended pregnancies and MRs/abortions

According to United Nations Population Division population projection (<https://population.un.org/wpp/DataQuery/>; downloaded on 9-25-2020), there were 45 million women ages 15-49 in 2017 in Bangladesh. Assuming 85 percent of them are married and 25.4 percent of them are using pill, there were 9.7 million pill users. Assuming an annual failure rate of 4.5 percent, 436,000 women would conceive with unintended pregnancies while using the pill in 2017. Singh, et al., 2017, show that 48 percent of pregnancies were unintended in 2014 and that 21 percent and 7 percent of *all* pregnancies ended in abortion and MR, respectively. Twenty-eight percent of all pregnancies ending in abortion corresponds to 58 percent (0.28/0.48) of unintended pregnancies ending in abortion (assuming intended pregnancies are rarely aborted). Therefore, assuming 58 percent of the 436,000 unintended pregnancies resulting from pill failure end in MR/abortion, there were an estimated 253,000 MRs/abortions in 2017 associated with pill failure. This number is about 8 percent of the assumed 3.2 million births that took place in 2017 in Bangladesh.

Note 2 on the estimation of the number of discontinuers due to lack of access or inconvenience

Applying the method-specific prevalence rates of 25.4 percent pill use, 10.7 percent injectable use, and 7.2 percent condom use (NIPORT & ICF, 2020) to the estimated number of married women of reproductive age from Note 1, estimates that there were 9.7, 4.1, and 2.7 million pill, injectable, and condom users, respectively, in 2017. Multiplying those numbers by the 12-month discontinuation rate (1% pill, 1.6% injectable, and 10.3% condom) due to lack of access or inconvenience (NIPORT & ICF, 2020) estimates that 97,000 pill, 65,000 injectable, and 283,000 condom users discontinued their method for these reasons annually, for a total of 445,000 discontinuations.

Note 3 on the estimation of the number of PPIITLs

Rahman, et al. (2020) show that 23 percent of women delivering at facilities accepted a method if they were offered an IUD, implant, or tubal ligation. Therefore, 345,000 women out of 1.5 million women delivering in a health facility would potentially accept PPIITL if it were offered to them.

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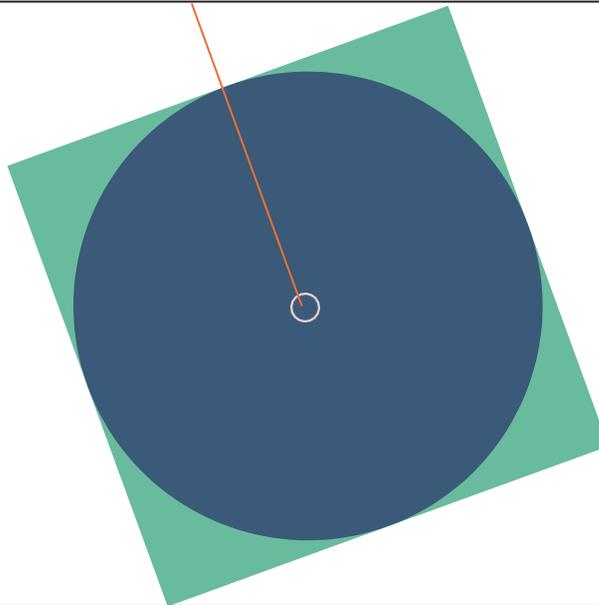
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Data for Impact (D4I)

University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, North Carolina 27516 USA
Phone: 919-445-9350 | Fax: 919-445-9353
D4I@unc.edu
www.data4impactproject.org

icddr,b

68, Shaheed Tajuddin Ahmed Sarani
Mohakhali, Dhaka 1212, Bangladesh
Phone: +880 (0)2-982-7001 to 10
Fax: (+88 02) 9827075, 9827077
rdm.icddr.org
www.icddr.org



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