

Increasing Women's Use of the IUD for Family Planning

The intrauterine device (IUD) is highly effective, easy to use, and has few side effects (Hatcher et al. 1997). The device costs the provider about US\$2.00 and offers a duration of protection per unit that makes it the most cost-effective of the temporary methods if used for two years or more (Chiou et al. 2003).

The IUD's many advantages also make it a very good alternative for reducing unmet need for long-term contraception around the world. Between 5 and 17 percent of all married women of reproductive age in 53 less-developed countries do not want to have more children but are not using a contraceptive method (Ashford 2003). Because the IUD can be provided in primary health centers and posts at low cost, it can complement female sterilization and vasectomy to help women achieve their fertility goals, especially in rural areas.



Vivek Sharma/Population Council

IUD counseling at a health center in Gujarat, India.

Despite these advantages, the IUD is underused. Only 5 percent of married women in developing countries other than China¹ (1% in Africa, 4% in Asia outside China, and 8% in Latin America and the Caribbean) use the method (Salem 2006).

¹In China, 84 percent of married women use a family planning method, and of those, 43 percent use IUDs (Salem 2006).

The Frontiers in Reproductive Health Program (FRONTIERS) conducted projects in Africa, Asia and the Near East, and Latin America and the Caribbean to understand why the IUD is not used more extensively and to test strategies to make it more accessible and acceptable for couples. This brief describes findings from these studies and suggests approaches for increasing the availability and use of IUD services.

- *The IUD is a safe, effective, cost-effective, and reversible long-term family planning method.*
- *Improving provider knowledge and skills and conducting outreach to clients can increase use of the IUD.*
- *Both professional and paraprofessional providers can deliver IUD services safely.*

Advantages of the IUD

- One pregnancy (or less) per 125 users in the first year of use
- Protection up to 10 years
- Immediately reversible
- Can be used during lactation and menopause
- No adverse reaction to medication, including antiretroviral therapy
- Few side effects
- Convenient for users (annual checkups compared to more frequent checkups for users of other methods, thus lower costs for revisits and resupplies)
- Can be inserted by trained providers at nearly any clinic

(Sources: Hatcher et al. 1997; Salem 2006)

Reasons for low IUD use

FRONTIERS conducted studies in Ghana (Gyapong et al. 2003; Osei et al. 2008); India (Khan et al. 2007) and Guatemala (Brambila and Taracena 2003) to assess the reasons for low IUD use. These studies found that IUD use is affected by a variety of factors having to do with the delivery of IUD services the demand for IUDs:

- **Lack of equipment and trained staff to provide the services.** In Guatemala, for example, only one-third of the Ministry of Health (MOH) health centers had both the basic equipment and at least one trained staff member

to provide IUDs. Although most studies found that only a minority of providers had negative perceptions of the method, they seemed to lack confidence in their skills to deliver the method, suggesting the need for more extensive training to maintain competency among those who have been trained.

- **Insufficient knowledge among providers.** In India about half of health care providers did not recognize that IUD use was contraindicated in the presence of sexually transmitted infections (STIs), and about one-fourth did not know the IUD's effective duration.

- **Insufficient information to potential clients.** In Guatemala, analysis of information given to simulated clients showed that providers mentioned only 12 percent of the information items about IUDs that they should give clients during counseling sessions according to the family planning service delivery guidelines. In Ghana, the IUD was not mentioned in nearly one-fourth of the counseling sessions.

- **Policy and programmatic barriers.** In many countries, only doctors and nurses are allowed to provide IUD services, even though nurse auxiliaries and other paramedical providers staff most of the health centers and posts. Also, many programs offer the IUD only in the interval period (after the six-week postpartum period) and do not offer it to postpartum and postabortion clients.

“The IUD can make you menstruate five times in a month...”

“Sometimes it can tilt to the side and may result in pregnancy...”

– Comments of focus group participants in Ghana reflect common misconceptions about the IUD (Osei et al. 2008)

■ **Clients' lack of knowledge about IUDs.** Demographic and Health Surveys show that large proportions of women in low IUD-prevalence countries are unaware of the IUD, and focus groups have shown that few of those who have heard of the method have any factual knowledge about the advantages, disadvantages, side effects, sources of supply, and cost of IUD services. Further, in many countries, a large proportion of women have heard negative rumors or hold inaccurate beliefs about the method (Salem 2006).

Strategies to increase access to and use of the IUD

FRONTIERS tested a variety of approaches including improving providers' capacity to provide IUD services, training paraprofessionals, increasing clients' demand for IUDs, and identifying opportune times to offer IUDs.

Innovative training strategies

Training for IUD service delivery usually entails group instruction, including classroom-based theory review and practice in insertion and removal using anatomical models, as well as supervised practical training with patients. Training generally also

Box 1.

Checklist to rule out pregnancy

Where pregnancy tests are unavailable, health providers, fearing possible harm to fetuses, often deny contraception to non-menstruating clients. Family Health International developed a checklist to help providers rule out pregnancy and provide contraceptives, including the IUD, to these women.

The checklist has six questions. If the client answers no to all six questions, pregnancy cannot be ruled out and the client should await menses or use a pregnancy test. If the client answers yes to any of questions 2 to 6, the method can be provided. If the client answers yes to question 1, the insertion should be delayed until 4 weeks after delivery. The questions are the following:

- Have you had a baby in the last 4 weeks?
- Did you have a baby less than 6 months ago, are you fully or nearly-full breastfeeding, and have you had no menstrual period since then?
- Have you abstained from sexual intercourse since your last menstrual period or delivery?
- Did your last menstrual period start within the past 12 days?
- Have you had a miscarriage or abortion in the last 12 days?
- Have you been using a reliable contraceptive method consistently and correctly?

(Source: FHI 2007)

addresses counseling, contraceptive methodology, ruling out pregnancy (see Box 1), use of job aids, and community outreach. Interventions are evaluated in terms of changes in providers' knowledge and behavior, cost, and effect on services provided (see Box 2).

FRONTIERS operations research (OR) projects tested two different practical training strategies in operations research projects: training in clinics that provide a high volume of IUD services,

and training in providers' own service delivery units, which is particularly useful in countries and areas with a very low prevalence of and demand for IUD services.

Training in high-volume centers. In Honduras training was offered at clinics that were seen as offering a large number of weekly IUD insertions. The study called for trainees to stay in these clinics for up to one

Box 2.

Indicators to evaluate training results

FRONTIERS OR projects used innovative indicators that are rarely reported but should become an integral part of reports evaluating training activities, including:

- Number of service providers beginning and ending theoretical and practical training by type of provider
- Number and proportion approving practical training (certified to provide the service)
- Number and proportion who conducted IUD insertion and removals in their service delivery units in the year after completing training
- Number of services provided during the following year
- Duration of training
- Cost of training per certified agent
- Impact of training on total number of services provided by service delivery unit

week to complete a minimum of five insertions (or as many as needed by the trainee) to achieve competency in IUD insertion procedures. Competency in removal was achieved using anatomical models. However, only 62 percent of the 183 nurse auxiliary trainees were able to complete their training, mostly because the demand for IUD insertions was not sufficient to enable them to conduct the supervised insertions. Further, a large proportion of those who completed training did not insert IUDs on return to their facilities, mainly because they did not feel confident in their skills and because they did not conduct demand-generating activities in their communities (Villanueva et al. 2001).

Training in providers' facilities. In Guatemala problems of low demand were addressed by conducting training at the service delivery units. Once trainees had identified potential IUD clients, they were trained in their facilities (68 health centers and nine health posts). During their visits, trainers used a checklist of itemized service delivery protocols to monitor the availability of materials, supplies, and forms, and to assess the trainees' mastery of counseling and clinical procedures. Follow-up visits showed that three-fourths of the nurse

auxiliaries who completed the training (42 of 56) were still conducting insertions between 9 and 20 months after the end of the training. Thus, this training model seemed to better institutionalize the delivery of IUD services than training in clinics that provided a high volume of IUD services. However, the time needed for training was a problem: just over half (90 of 160) of the nurses and nurse auxiliaries who began training completed it, mainly because of job rotation or misunderstanding of the time commitment required for training (Montufar et al. 2005).

Mobile training and delivery models

Research in both Guatemala (Montufar et al. 2005) and Honduras (Villanueva et al. 1998) tested the effect of provider training in health fairs. In this model, providers at a health center informed community members that on a specific day they could receive a set of reproductive health services that were normally not available (such as the Pap test and the IUD) and invited them to attend on that day. Thus they concentrated demand for the service on one single day, allowing for training of providers. Although several teams used this model and recommended it highly, data to evaluate the model were not collected. This model is commonly used in Asia, with well-documented results. Additional operations research might be used to assess the effectiveness of this approach in other areas.

Two OR projects in Peru and Paraguay showed that delivering IUD services through mobile health service providers is both feasible and effective. These projects offered important lessons to the many organizations that provide itinerant health services. In Lima, Peru, three groups of 14 peripheral communities were formed according to the frequency with which physicians visited them to provide health services, including the IUD: weekly, biweekly, or monthly. In total 1,136 sessions were held during 11,196 visits, including 1,387 IUD insertions and 64 removals. The majority (89%) of family planning visits were IUD visits, and almost all of these (92%) were referrals from community-based agents. The mean number of insertions per physician visit was 1.3 in the monthly posts, 1.4 in the two-sessions per month posts, and 1.1 in the weekly posts, a nonsignificant difference.) Interestingly, the catchment areas (defined as the radius of the circle within which 75% of the clients lived) were 600 meters, 800 meters and 1,200 meters respectively—the more frequent the sessions, the larger the catchment area (Ramos et al. 1985).

In Paraguay, eight clinics in small cities (fewer than 65,000 inhabitants) opened 32 community back-up posts (four for each clinic) located between 10 and 100 kilometers from the

clinics. Staffed by nurse-obstetricians, the posts offered general maternal and child health and treatment services and operated in each community every two weeks. As in Peru, these rural posts were especially effective in attracting new family planning users, including new IUD users. Clinics' IUD sales increased by 19 percent, and posts conducted a mean number of about 0.5 IUD insertions per session (Melián et al. 1989).

Training paraprofessionals to insert IUDs

In many developing countries, service delivery guidelines stipulate that only professional providers, such as doctors and

nurses, can provide IUD services. Paraprofessionals (such as nurse auxiliaries, auxiliary nurse midwives, and community health officers) usually offer preventive health services. They are the most numerous providers in urban health centers and the sole providers of health services in rural health posts. Thus, training nurse auxiliaries in the delivery of IUD and other reproductive health services such as injectable hormonal contraceptives and Pap smears is crucial to increase access to these services.

Five operations research projects in Ghana, Guatemala, Honduras, and India have shown that paraprofessional providers can deliver safe and effective IUD services.

In Honduras, for example, 60 nurse auxiliaries (who have between six and nine years of

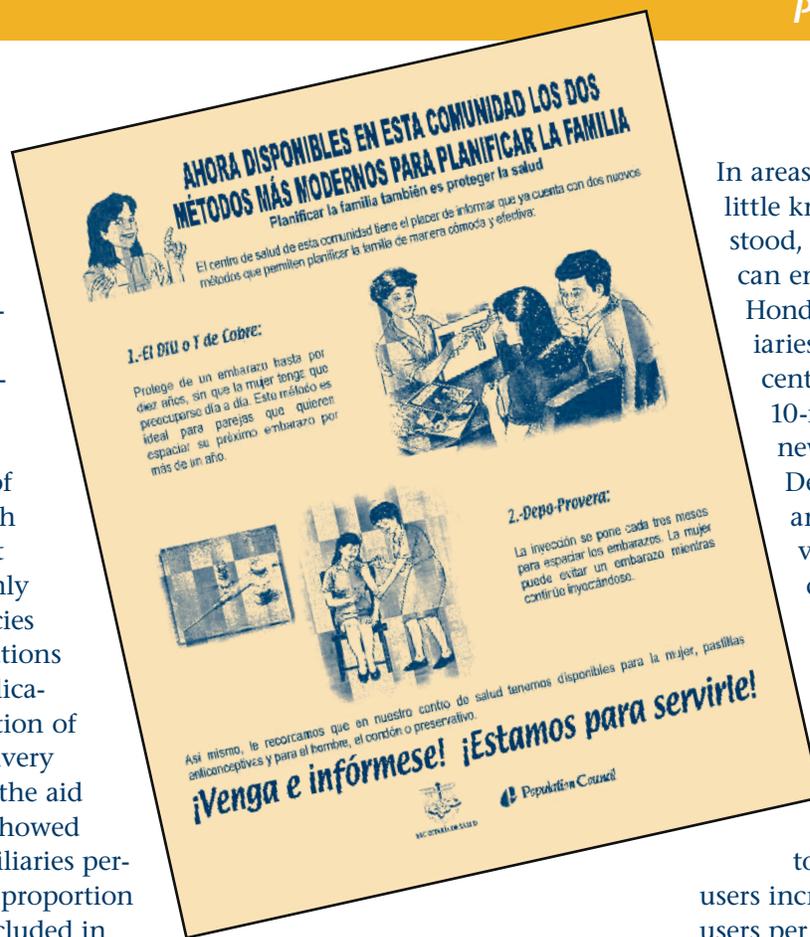


With training, nurse auxiliaries, like this one in a Guatemalan health center, can provide access to safe IUD and other family planning services in rural areas.

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basic education and between one and two years of health training) and their supervisors carried out 2,030 IUD insertions over a period of 12 months with the subsequent detection of only three pregnancies and no perforations or other complications. Observation of the service delivery activities with the aid of a checklist showed that nurse auxiliaries performed a high proportion of the steps included in the recommended service delivery protocol, including providing appropriate information and correctly implementing the clinical steps itemized in the protocol (Villanueva et al. 1998).

In Guatemala 45 trained nurse auxiliaries conducted a monthly mean of 1.2 insertions during a four-month period, with only one pregnancy and one perforation that was appropriately handled. In Ghana 12 community health officers (CHOs) in rural areas conducted 33 insertions in community compounds, compared to only four insertions in similar compounds without trained CHOs over a 12-month period; no complications were reported (Montufar et al. 2005; Osei et al. 2008).



Conducting outreach to increase demand for services

Training alone does not guarantee use of IUD services. For example, a second study in Honduras tested the effects of an expanded training for nurse auxiliaries. A year after the training, more than half of the nurse auxiliaries who completed training had not inserted any IUDs because of low demand (Villanueva et al. 2001). This suggests that there is a need for outreach to advertise available services, as well as to counteract misperceptions about the method.

In areas where the method is little known or poorly understood, community outreach can enhance demand. In Honduras, nurse auxiliaries at six rural health centers (RHCs) gave daily 10-minute talks about new services (Pap smears, Depo-Provera, and IUDs) and asked each woman visiting the RHCs to distribute five leaflets to friends and neighbors (see Figure). Nurse auxiliaries at six control centers did not conduct outreach. New IUD users increased from 2.8 to 4.5, new injectable users increased an average of 1.8 users per month and Pap smears increased by 1.6 samples per month. However, the only statistically significant increase was for injectable users (Mendoza and Vernon 2001).

However, given the promising results, FRONTIERS worked with the MOH, the Honduran Family Planning Association, ASHONPLAFA, and EngenderHealth on an expanded study. Forty-one health centers and posts were randomly assigned to either the experimental or control group. In the experimental group, providers were trained to conduct client and community information activities. They were given a set of informational materials including: (1) a manual for communicating information about reproductive health services,

(2) a half-letter-sized flyer and a double-letter-sized poster highlighting the key attributes of the method, and (3) a brochure explaining the characteristics, advantages, and disadvantages of the IUD. In the experimental group, the monthly average of IUDs delivered by the health center doubled from 1.1 to 2.0, whereas in the control group it decreased from 1.7 to 0.8, probably as a consequence of the emergency raised by two hurricanes that struck Honduras while the experiment was under way (see Table 1). The intensity with which the health centers implemented the communications strategy was correlated with a corresponding increase in the number of insertions.



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An ASHONPLAFA family planning clinic in Honduras.

These results suggest a potentially significant increase in access to IUDs on a larger scale: if the strategy were expanded to all 1,108 MOH health centers in Honduras, the annual number of IUD acceptors could possibly

increase from 11,500 to about 20,000 new IUD users. Moreover, clinic records showed that the strategy attracted women who were most in need of family planning services (Flores et al. 2007).

Other studies also highlight the importance of conducting community information activities to increase demand for little-known, long-term methods:

- In Gujarat, India, strengthening the technical skills of 76 paraprofessionals and distributing leaflets and posters about the IUD increased the number of insertions from 204 to 262 per month at each participating facility in urban settings, and from 40 to 107 per month at each facility in rural areas (Khan et al. 2007).
- In Ghana, community health officers and community health volunteers were given IUD updates and refresher training

Table 1.
Total and mean monthly number of IUDs inserted by group and time period

Period	Group			
	Experimental		Control	
	Total	Mean	Total	Mean
January – September 2005 (pre-intervention)	211	1.1	310	1.7
October 2005 – May 2006 (post-intervention)	294	2.0	125	0.7
Before/after difference (p < .05)	83	0.88	-185	-0.94

Source: Flores et al. 2007.

in counseling skills and were encouraged to increase IUD awareness among community members through community-based structures and processes. Knowledge of long-term methods increased as did the proportion of respondents who reported obtaining information about long-term methods from community health officers and community volunteers (Osei et al. 2008).

Providing IUDs to women in the postpartum and postabortion periods

Insertion of the IUD addresses a need for contraception among postpartum and postabortion women. The World Health Organization (WHO) and other international organizations recommend that women wait at least two to three years between births. Studies supported by USAID suggest that a three- to five-year interval could help reduce maternal and infant risks even further (WHO 2004; WHO 2006). Because the IUD is a long-term method that does not interfere with lactation and can be inserted at any time except between the third and 30th day after delivery (to minimize the risk of expulsion or uterine perforation), it is one of the best

choices for women in the postpartum period.

OR studies have shown that it is feasible and acceptable to provide IUD service at this time and further, that contraceptive prevalence six months after delivery is higher among those women who delivered in hospitals offering postpartum IUD services (Foreit et al. 1993). Studies in Guatemala and Honduras showed that a majority of postpartum women (71% and 85%, respectively) wanted to use a family planning method, but only a minority (12% and 10%) received one (Brambila, Figueroa, and Taracena 2002; Medina et al. 2001).

These results served as the basis for an intervention in five hospitals in Honduras. Clinics in participating hospitals received outreach and educational materials, equipment and supplies, and staff in OB-gyn wards attended a 30-hour counseling and service delivery workshop and a five-

day contraceptive methodology workshop. Sixty-five providers were certified to provide postpartum IUD services, mostly nurses and nurse auxiliaries, who attended the majority of the deliveries at the five hospitals. In addition, the technical staff and the project coordinator held quarterly meetings in each hospital to discuss the data collected in small quarterly surveys of users as well as service statistics. The project had a significant effect on the proportion of clients who were offered, and received, contraceptive information and services, including the IUD (see Table 2).

By the endline survey, less than one year after the beginning of project activities, 33 percent of all women had received a method, and half of these had requested an IUD (Medina et al. 2001).

Client medical histories have also shown that a large proportion of women who accept an

Table 2.

Percentage of postpartum women who received family planning information and services, Honduras

	Pre-intervention	Post-intervention
Received FP information	43	87
Offered FP method	42	82
Received method	10	33
Wanted method but did not receive	41	7

Source: Medina et al. 2001.

IUD in outpatient clinics are breastfeeding women in the first six months post-delivery (see, for example, Flores et al. 2007) and that the IUD is very well

accepted in postnatal care visits at six weeks (Vernon et al. 1993). Thus, outpatient clinics should emphasize presenting the IUD as an option during this time.

Conclusions

The IUD is a safe, effective, and cost-effective method, but it is also one of the least well-known methods among both providers and potential clients. To increase use of the IUD, programs need to train providers appropriately both in counseling and contraceptive technology, and conduct outreach activities to increase knowledge of the method among potential users.

Programs in low-demand settings should consider training providers onsite and allow appropriately trained paraprofessional staff to provide IUD services.

Programs should also look to introducing the IUD as a contraceptive option before patients are discharged from the hospital after delivery, miscarriage, or abortion. Postpartum insertion of IUDs offers such advantages as ease of insertion, appropriate facilities, convenience for the woman, and lower cost. The IUD can also help address an unmet need for contraception among women who seek outpatient services in the six-week to six-month postpartum period. These women should be offered IUDs as part of a full range of contraceptive methods.

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For more information on the IUD, see the IUD Toolkit, <http://www.maqweb.org/iudtoolkit/>. The Population Council was one of the members of the IUD Subcommittee of USAID's Maximizing Access and Quality Initiative that compiled the toolkit, which provides comprehensive, standardized, scientifically accurate, and evidence-based information on the IUD. The toolkit also provides guidance on best practices as well as tools to help improve access to and quality of IUD services.

The Population Council conducts research worldwide to improve policies, programs, and products in three areas: HIV and AIDS; poverty, gender, and youth; and reproductive health.

The Frontiers in Reproductive Health Program (FRONTIERS) applies systematic research techniques to improve delivery of family planning and reproductive health services and influence related policies. FRONTIERS is funded by the U. S. Agency for International Development (USAID) and led by the Population Council in collaboration with Family Health International.

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