

The Costs and Benefits of IUD Follow-Up Visits In the Mexican Social Security Institute

By David Hubacher, Carmen Cárdenas, Daniel Hernández, Manuel Cortés and Barbara Janowitz

Context: In some settings, clinicians routinely schedule IUD users for follow-up care, but little effort has been made to compare the health benefit of repeat visits with the costs to programs.

Methods: In a prospective study at eight clinics of the Mexican Social Security Institute, 1,713 new IUD users were instructed to return for either two or four visits in the first 12 months after insertion of the device. To estimate the health benefits and costs of each regimen, data were collected on the frequency of various medical interventions and the labor and material costs.

Results: Of the nearly 2,000 visits made overall, 235 in the four-visit regimen and 159 in the two-visit regimen involved medical interventions to treat serious conditions; 53 and 29, respectively, were scheduled visits by women who had no symptoms but were found to require medical care. Assuming that the program provides about 250,000 IUDs annually, costs would total \$1.7 million for the four-visit and \$900,000 for the two-visit regimen; the four-visit approach would generate 8,387 more visits involving medical interventions than the two-visit regimen, at a cost of \$48 per visit.

Conclusions: Additional follow-up visits create an opportunity to diagnose and treat problems, and therefore provide increased safety for IUD users. However, a four-visit regimen costs much more than a two-visit approach.

International Family Planning Perspectives, 1999, 25(1):21–26

Clinicians in many countries schedule periodic checkups for new acceptors of IUDs; though the worldwide prevalence of this practice is not known, regularly scheduled follow-up visits (as many as four in the first year after the device is inserted) are commonplace in a diverse range of settings.¹ Most experts on family planning and IUDs recommend no more than two visits in the first year of use.² However, other key sources do not specify the appropriate number of follow-up visits,³ and one recommends three revisits in the first year.⁴

How the recommended number of IUD follow-up visits is established is unclear; however, the rationale for frequent revisits may be grounded in clinical trial protocols or related to health providers' concern about their patients' developing pelvic inflammatory disease. Frequent follow-up visits may be intended to identify asymptomatic conditions requiring medical interventions, such as lower genital tract infections from *Chlamydia trachomatis* and early stages of clinical anemia. Clinicians' recommendations to IUD users may reflect either their institution's guidelines or their own sense of what represents appropriate health care.

Revisits entail costs to both clients (including clinic fees, transportation costs, lost wages and variable opportunity costs)

and providers (in terms of draining overall resources and interfering with scheduling appointments for clients with medical needs). Consequently, regimens of frequent revisits should afford a clear and demonstrated health benefit before they are accepted as standard medical practice.

Research on IUD follow-up visits has been limited in scope and methodology. A reanalysis of clinical trial data found little medical benefit of routine follow-up visits.⁵ However, the analysts relied on information drawn from case report forms and a secondhand medical interpretation of the clinic visit; in addition, they did not estimate the costs of the visits and compare them with the possible health benefits. In Ecuador, researchers interviewed returning IUD users to estimate (indirectly) the programmatic implications of different revisit norms; they found that reducing the number of follow-up visits would result in a small decrease in the number of problems detected, but also would lead to major cost savings and improvements in access to services.⁶

The study we describe in this article improves on previous efforts by using an experimental design to compare the medical benefit with the cost of routine follow-up care for IUD users obtaining services at the Mexican Social Security Institute (IMSS), Mexico's largest health care provider.⁷

When the study was launched, Mexican public health care institutions were operating under guidelines specifying three revisits in the first year postinsertion,⁸ but informal interviews with providers suggested that the guidelines were not being followed consistently and that many physicians often recommended four revisits in the first year of IUD use.

Our study was designed to answer both clinical and cost questions. The primary clinical question was whether more scheduled checkup visits increase the safety of IUD use. The key cost questions were how much each IUD follow-up visit costs IMSS and what the projected yearly costs to the institution are of maintaining recommended follow-up schedules. The answers to these questions can be used to compare the increased costs of more scheduled visits with the possible health benefits. Given that IUDs are the most widely used form of reversible contraception in Mexico, representing 22% of the method mix,⁹ the importance of this research to the country's family planning program is evident; indeed, this information is requisite for purposes of improving IUD services.

Data and Methods

Using primary data collected at IMSS health clinics, our study compared two regimens for following up new IUD users: four visits (checkups one, three, six and 12 months after insertion) and two visits (checkups one and 12 months after insertion). A block assignment was employed to place IUD users in a particular regimen: We began by recruiting for the four-visit regimen and then switched to the two-visit regimen when half of the clinic's quota was reached. The quota for each

David Hubacher is senior research associate and Barbara Janowitz is director of health services research, Family Health International (FHI), Research Triangle Park, NC, USA. Carmen Cárdenas and Daniel Hernández are consultants, Mexican Academy for Medical and Demographic Research, Mexico City. Manuel Cortés is medical researcher, Instituto Mexicano del Seguro Social, Mexico City. Support for this study was provided by FHI with funds from U.S. Agency for International Development (USAID) cooperative agreement CCP-A-00-95-00022-02. The views expressed in this article do not necessarily reflect those of FHI or USAID. Helpful comments on earlier versions were provided by Cynthia Waszak and Judith Fortney.

Table 1. Percentage distribution of IUD users, by number of follow-up visits made, according to follow-up regimen, Mexican Social Security Institute, 1992–1993

No. of visits made	Four-visit regimen* (N=808)	Two-visit regimen (N=905)
0	35.3	47.0
1	25.9	34.2
2–3	27.8	17.3
≥4	11.1	1.6
Total	100.0	100.0

*The distributions differ significantly at $p < .05$.

clinic was based on client volume and total study size required to measure a 5% difference in complications resulting in early discontinuation (the best measurable indicator we had for estimating study size requirements). The recruitment phase simulated a random assignment, since the two groups of women were homogeneous in terms of all available socioeconomic, demographic, gynecologic and insertion-related characteristics.¹⁰

The research unit at the IMSS Coordination of Reproductive and Maternal-Infant Health Services managed all aspects of the study, with technical assistance from Family Health International. Clinic staff were trained to implement the study and were supervised by the physician in charge of services.

Data collected during follow-up visits were used to develop easily summarized clinical descriptions and outcomes. The primary dependent variable used to compare health outcomes in the two regimens was serious medical interventions, de-

defined as prescriptions for antibiotics (in conjunction with a diagnosis of genital tract infection); requests for cultures, X rays or pregnancy tests; and IUD removals for medical reasons (including expulsions). The second health-related variable was patients' complaints of symptoms that may be associated with IUD side effects or with genital tract infection, such as menstrual irregularities, discharge, itching, fever, abdominal inflammation or pain, dyspareunia and dysmenorrhea.

The third variable necessary for analysis of health outcomes was whether the visit was scheduled or unscheduled, which we determined by asking each woman the purpose of her visit. If the stated purpose was to obtain a scheduled checkup, the visit was coded accordingly, independent of its timing. (This definition reflects the perspective of the user and does not misclassify routine visits that were rescheduled.) In comparing the regimens, we defined any increased ability of the four-visit approach to aid in the detection of situations requiring a serious medical intervention as an added benefit.

We also conducted analyses estimating the costs of services, where the primary dependent variable was the cost to the provider of different types of IUD follow-up visits (scheduled versus unscheduled and involving medical interventions versus involving no such interventions). Only labor and material costs were considered. Labor costs were the total cost of employing individuals involved in IUD follow-up service provision (receptionists, nurses and physicians), including wages

and benefits (leave, retirement, health insurance, etc.), and were computed as a function of the time spent providing these services. Material costs included disposable items and drugs used for treatment. No overhead costs associated with administration or depreciating costs of capital goods were considered.

Recruitment for the study began in June 1992 and continued for four months; women in eight clinics who wanted an IUD and had no contraindications for use were asked to participate in a study examining services at IMSS. In all 1,713 new acceptors were enrolled: 808 in the four-visit regimen and 905 in the two-visit regimen. Participants in both groups received a TCu 380A IUD, and since all women were scheduled for a return visit one month later, the groups were equivalent up to that point. Both regimens included a visit 12 months after insertion. This follow-up period enabled us to measure variations in the way the providers administering the different regimens tallied visits, identified medical problems and incurred costs.

At the time of enrollment, women were given an appointment for the first follow-up visit and told they should return for either one or three additional visits within the next year. All women received the same general information about the IUD and were given instructions regarding proper, safe use. They were told about the types of adjustments their bodies would make in response to the presence of the IUD and about the possible warning signs requiring medical attention. In addition, all women were instructed on how to check for the IUD strings following every menstrual cycle. Most important, women were told that they could return to the clinic for a checkup at any time and did not have to wait for a scheduled visit if they felt they had a problem.

Revisits were scheduled one at a time, and the date and time of the next visit were written in the clinic appointment book and in a small booklet given to the client. (These are the standard appointment procedures used in IMSS family planning clinics.) Thus, for example, women in the four-visit regimen were scheduled for a three-month visit at the conclusion of their first visit. No attempt was made to remind women of their appointments or to contact those who failed to appear.

Four key data collection instruments were used: admission forms (to record baseline information on the IUD acceptors), follow-up records (to document clinical information on the return visit), patient flow forms (to measure the amount of time different personnel spent with the returning IUD users) and cost spreadsheets (to account for the cost of materials used in different types of visits, and to record the salaries and benefits of those providing services). Data from the spreadsheets and the patient flow form were used to estimate labor costs. The spreadsheets provided data on the cost per unit of labor, which was then multiplied by the average time spent on a visit.

A similar procedure was used to estimate material costs, except that the average

Four key data collection instruments were used: admission forms (to record baseline information on the IUD acceptors), follow-up records (to document clinical information on the return visit), patient flow forms (to measure the amount of time different personnel spent with the returning IUD users) and cost spreadsheets (to account for the cost of materials used in different types of visits, and to record the salaries and benefits of those providing services). Data from the spreadsheets and the patient flow form were used to estimate labor costs. The spreadsheets provided data on the cost per unit of labor, which was then multiplied by the average time spent on a visit.

Figure 1. Number of IUD follow-up visits, by months after insertion, according to regimen

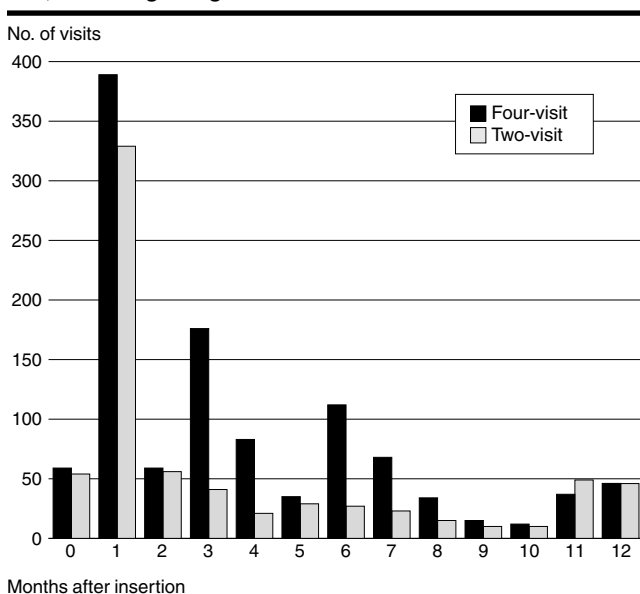


Table 2. Percentage distribution of IUD follow-up visits, by purpose, according to regimen

Purpose of visit	Total (N=1,845)	Four-visit* (N=1,135)	Two-visit (N=710)
Scheduled	83.1	87.2	76.5
Unscheduled	14.4	10.4	20.7
Medical follow-up†	2.5	2.4	2.8
Total	100.0	100.0	100.0

*The distributions differ significantly at $p < .05$. †Visits to follow up on previous diagnosis or treatment.

amount of materials used per visit was obtained from interviews with providers. Finally, IMSS service statistics indicating the number of IUD insertions performed in the urban program in 1992 were incorporated into the analysis to estimate the number of return visits that would have been generated under a two- and four-visit regimen, and to estimate the costs of each regimen.

Results

Volume and Timing of Visits

Although women in both groups were scheduled for a checkup after one month of IUD use, 35% of the women in the four-visit regimen and 47% in the two-visit group did not return (Table 1). Only 11% of women in the four-visit regimen made four or more visits, while 19% of women in the two-visit regimen made two or more visits.

As expected, the total number of follow-up visits was much higher in the four-visit group (1,135) than in the two-visit group (710). If all women had complied perfectly with their follow-up regimen, women in the four-visit regimen would have made twice as many visits as those in the two-visit regimen; however, given a mean of 1.4 visits per woman in the four-visit group and 0.8 in the two-visit group, the actual ratio was 1.8 to 1.

Aside from generating expected differences in the volume of visits, the recruitment strategies produced different patterns in the timing of visits (Figure 1).

Table 3. Percentage and number of visits involving a serious medical intervention, by type of intervention, according to regimen

Type of intervention	Four-visit		Two-visit	
	%	No.	%	No.
Total	20.7	235	22.4	159
Antibiotic†	15.5	176	14.5	103
Culture	5.6	64	5.5	39
X ray	0.8	9	1.0	7
Pregnancy test	1.8	20	1.6	11
Removal for medical reasons	1.2	13	2.1	15

†In conjunction with diagnosis of genital tract infection. Note: Numbers and percentages do not add to totals because some visits included multiple serious medical interventions.

There is a clearly defined spike around the one-month point and a significant cluster of visits 11 and 12 months after insertion, when both regimens had scheduled follow-ups. In the four-visit regimen, additional spikes are noted three and six months postinsertion. The visits at other points are due to the timing of unscheduled visits and women's decisions to make scheduled visits at their own convenience.

There is a noticeable trend in terms of decreasing attendance at scheduled follow-up visits as the duration of use increases. Nevertheless, the difference in number of visits between the two regimens is constant and obvious. Also, it is notable that women in the two-visit regimen matched their counterparts in volume of visits for the last few months of follow-up, when their only other scheduled contact with clinic staff had been 10 or 11 months earlier.

Type of Visit

As expected, the vast majority (83%) of follow-up visits were scheduled (Table 2); 14% were unscheduled and 3% were for follow-up of a previous diagnosis or treatment. There was a clear, statistically significant difference in this distribution by follow-up regimen. A higher proportion of visits were scheduled in the four-visit regimen (87%) than in the two-visit approach (77%). Conversely, the two-visit regimen had a much higher proportion of unscheduled visits (21%) than the four-visit regimen (10%). In both groups, 2–3% of visits were for medically indicated follow-up.

In both regimens, 21–22% of visits involved a serious medical intervention (Table 3), predominantly the prescription of an antibiotic to treat suspected cases of genital tract infections. Serious medical interventions occurred throughout the follow-up period, with no noticeable difference by regimen (Table 4). The number of interventions rose as the number of visits made in a postinsertion interval increased. Thus, in the four-visit regimen, there were more visits at one, three and six months than at other intervals, and the number of interventions was also higher.

One might expect a high proportion of visits during months without scheduled visits to involve serious medical interventions, since unscheduled visits are often made because of medical problems. Notably, however, there is no consistent pattern that convincingly supports this theory.

To understand better the role of each regimen in helping to identify conditions requiring medical interventions, it is necessary to tease out factors such as the pres-

Table 4. Number of serious medical interventions and total number of visits, by months postinsertion, according to regimen

Months postinsertion	Four-visit		Two-visit	
	Interventions	Visits	Interventions	Visits
0	16	59	9	54
1	53	389	70	329
2	19	69	10	56
3	37	176	7	41
4	11	83	3	21
5	8	35	8	29
6	27	112	3	27
7	15	68	12	23
8	16	34	6	15
9	6	15	2	10
10	1	12	6	10
11	12	37	13	49
12	14	46	10	46

ence of symptoms and type of visit (scheduled versus unscheduled). For example, an IUD user who makes an unscheduled clinic visit because she is experiencing worrisome symptoms may receive treatment for a particular problem; in this situation, it would be inaccurate to conclude that her follow-up regimen helped identify the condition requiring treatment.

Of the 1,108 visits made by women in the four-visit regimen, half were made by women without symptoms, and the vast majority were scheduled; 53 scheduled visits by women who were asymptomatic included a serious medical intervention (Figure 2, page 24). Of the 690 visits made among women in the two-visit regimen, 29 were scheduled by women who were asymptomatic and required a serious medical intervention. These 82 visits represent the possible benefit derived from scheduled follow-up care, since the women had no other reason to visit their clinician yet received serious medical interventions. Given that the two regimens had comparable numbers of women enrolled initially, the four-visit regimen appears to be nearly twice as beneficial as the two-visit regimen in terms of helping to identify situations requiring serious medical interventions.

Costs to the Program

The costs of visits varied considerably according to the characteristics of the visit (Table 5, page 24). Visits with an intervention were more than twice as costly as those with no intervention, partly because they required extra staff time to provide the additional services. For example, scheduled visits without any intervention used a mean of about five minutes of a physician's time, three minutes of a nurse's time and one minute of a receptionist's time; the corresponding times for

Table 5. Cost of IUD follow-up visit, by type of visit and cost, according to whether the visit included an intervention

Type of visit and cost	No intervention	Intervention
Scheduled	\$2.60	\$6.80
Labor†	2.00	3.00
Material	0.60	3.80
Unscheduled	\$2.30	\$6.80
Labor†	1.70	3.20
Material	0.60	3.60

†Salaries and benefits for physicians, nurses and receptionists.

scheduled visits with interventions were eight, six and two minutes, respectively (not shown). Interventions also increased costs because of the additional materials (drugs, laboratory tests, etc.) used.

By applying our findings on the costs and distribution of visits to the number of IUD insertions the IMSS urban program performed in 1992 (about 250,000¹¹), we estimate that the four-visit regimen would cost the program \$784,000 more than the two-visit regimen annually (\$1.7 million versus \$900,000). We further estimate that the four-visit regimen would provide 8,387 more serious medical interventions than the two-visit regimen; in other words, the four-visit regimen benefits program clients by identifying and treating 8,387 medical conditions that might otherwise go undetected.

For each regimen, costs are about equally divided between materials and labor; of the total cost differential, \$403,000 is for materials and \$381,000 is for labor (not shown). Assuming no reductions in staffing to reduce labor costs and assum-

ing that staff used in maintaining a four-visit regimen could continue to be fully utilized even under a two-visit regimen, then the only real cost to IMSS of having a four-visit regimen is that of materials. Thus, the cost per visit in which a situation requiring serious medical intervention is identified is \$48 (\$403,000/8,387).

If, on the other hand, more staff are needed to run a four-visit regimen (and if switching to a two-visit regimen generates idle time for staff), IMSS would spend an additional \$381,000 in resources to provide services. Thus, the cost per visit would be \$93 (\$784,000/8,387).

Discussion

The results of this research suggest that the practice of scheduling frequent revisits for IUD users aids in the detection of situations requiring medical interventions, and a four-visit regimen is about twice as beneficial as a two-visit regimen. However, the four-visit regimen is almost twice as costly as the two-visit regimen. The important question is what the additional costs are of the four-visit over the two-visit regimen as compared with the increased ability to detect the need for medical interventions. We estimated this additional cost to be \$48 per visit.

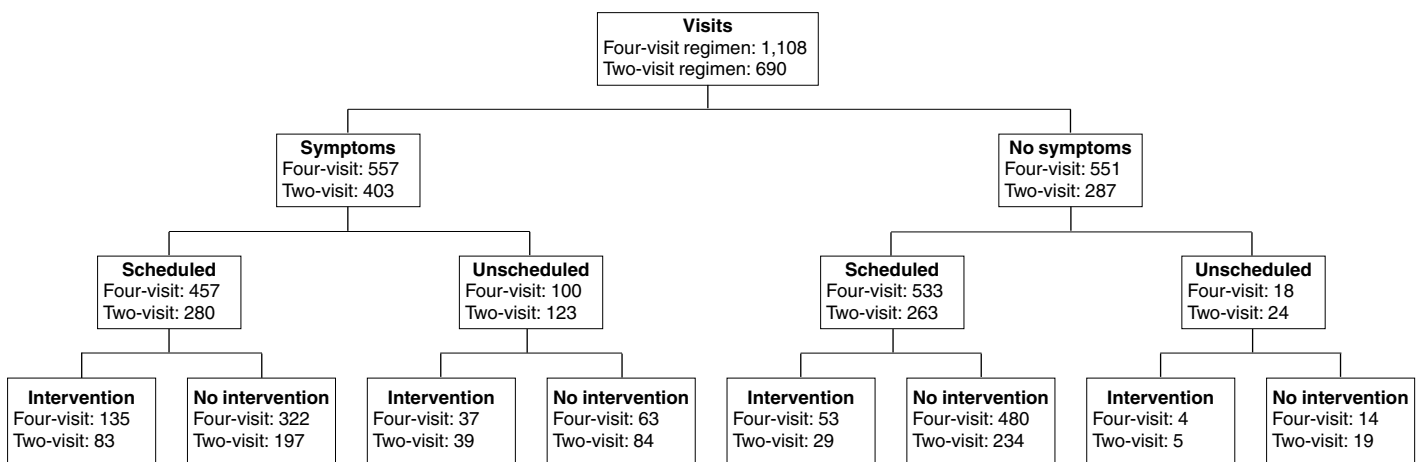
We did not study the effect that each regimen has on costs to IUD users. However, because women in the four-visit regimen made more visits, on average, than their counterparts, they likely incurred higher opportunity costs and possibly real financial losses in terms of wages or transportation costs. (IMSS does not charge copayments for family planning clinic visits.) Despite physi-

cians' recommendations, many women in our study failed to return for all suggested follow-up visits; perhaps the perceived benefit of the clinic visit was small in comparison to the costs (whatever those might have been). We do not know whether women's participation in the study influenced their compliance with physicians' recommendations to return for checkups.

This research benefited from an experimental design and was conducted in a natural service delivery environment, where providers instructed patients to return for follow-up, but the decision to return was up to the client. The experiment did not generate the volume of follow-up visits that one might anticipate in a clinical trial; however, the recruitment strategy produced logical differences in frequency and timing of follow-up visits. These differences preserved the integrity of the study design and enabled us to analyze the data without being excessively concerned about loss to follow-up. In addition, a survey of those lost to follow-up revealed that women assigned to the two regimens had similar experiences with respect to IUD side effects, visits to other facilities and medical interventions.¹² These findings suggest that if every IUD user had complied perfectly with her recommended schedule, the results would have been similar to what we found.

The study had many strengths, but it also had one important weakness: Physicians may have been conservative in their diagnoses and intervened medically when it was not necessary. This is particularly relevant for suspected instances of genital tract infection, since the study did not re-

Figure 2. Number of IUD follow-up visits, by characteristics of visit, according to regimen



Note: Interventions are serious medical interventions, defined as prescriptions for antibiotics in conjunction with diagnosis of genital tract infection; requests for cultures, X rays or pregnancy tests; and IUD removals for medical reasons.

quire laboratory tests to help make the correct diagnosis. Furthermore, given that prescriptions of antibiotics were the predominant type of serious medical intervention, we may have overestimated the benefit of scheduled follow-up visits for safeguarding the health of IUD users, since some of these antibiotics may not have been necessary. Future research should not rely solely on the physician's subjective findings and actions, but should incorporate objective criteria for measuring benefits (e.g., laboratory tests to confirm the presence of a specific pathogen causing a suspected genital tract infection).

In our analysis of serious medical interventions by months postinsertion, no clear patterns emerged that might provide insight into the optimal timing of scheduled follow-up visits, but the incidence of events was correlated with the number of visits made in that interval. Situations requiring serious medical interventions for IUD users may not be uniformly distributed according to postinsertion interval (e.g., expulsions are more likely to occur early, as are upper genital tract infections resulting from aseptic insertion conditions). However, there is no reason to think that such events should naturally occur in greater numbers three and six months after insertion as opposed to four and five months postinsertion. The obvious heaping of events on scheduled visit intervals lends more support to the suspicion that physicians may have intervened excessively.

Ultimately, the decision to modify revisit schedules will be left to program managers, who will have to determine whether the extra costs of additional visits are worth the added benefits. Under the conservative assumption that all serious medical interventions in this study were necessary, the manager need only compare the costs and benefits directly and decide which regimen to adopt. If the two-visit regimen is chosen, then any concern about needless medical interventions and overestimation of the benefit is irrelevant.

In evaluating their policy on return visits for IUD users, program managers at IMSS reviewed the findings from this study and consulted published literature on the topic. They also discussed the safeguards already in place at IMSS to minimize the incidence of adverse effects. (Such strategies include screening out potential IUD candidates who are at risk of sexually transmitted infections and providing quality counseling before insertion on safe and effective use.) Eventually, the program managers concluded that only one follow-up visit, one month after in-

sertion, is necessary; this recommendation is found in the institution's manual on contraceptive methods,¹³ which is used by employees who provide family planning services. The manual suggests that additional checkups can be conducted at any time the user experiences side effects or in conjunction with Pap smears.

Until recently, there has been little interest in examining whether contraceptive providers engage in practices that render questionable benefit. Scheduled follow-up visits, mandatory pelvic exams and laboratory tests are prime targets for possible challenge, depending on the contraceptive method and context in which the services are required. The single truth about services, however, is that someone is paying for them. Thus, while the benefit of a service may be somewhat obscure, the costs are not. When a body of research shows that a service's benefit is largely insignificant, managers must instruct providers to stop rendering it. This evidence-based approach to updating service delivery norms is an important component in improving services for all.

References

1. Foreit J et al., Cost control, access and quality of care: the impact of IUD revisit norms in Ecuador, *Journal of Health and Population in Developing Countries*, 1998, 1(2):11-18; Janowitz B et al., Should the recommended number of IUD revisits be reduced? *Studies in Family Planning*, 1994, 25(6):362-367; and Cárdenas C et al., *Comparing Two IUD Follow-Up Schemes: Final Report*, Research Triangle Park, NC, USA: Family Health International, 1996.
2. Hatcher RA et al., *The Essentials of Contraceptive Technology*, Baltimore, MD, USA: Johns Hopkins School of Public Health, Population Information Program, 1997; American College of Obstetricians and Gynecologists (ACOG), *The Intrauterine Device*, Technical Bulletin, Washington, DC: ACOG, 1992, No. 164; International Planned Parenthood Federation (IPPF), Medical and service delivery guidelines for family planning, New York: IPPF, 1992; Ortho Pharmaceutical Corp., *Prescribing Information: ParaGard® T380A Intrauterine Copper Contraceptive*, Raritan, NJ, USA: Ortho Pharmaceutical Corp., 1995; and McIntosh N, Kinzie B and Blouse A, eds., *IUD Guidelines for Family Planning Service Programs: A Problem-Solving Reference Manual*, Baltimore, MD, USA: Johns Hopkins Program for International Education in Gynecology and Obstetrics, 1993.
3. Centers for Disease Control (CDC), *IUDs: Guidelines for Informed Decision-Making and Use*, Atlanta, GA, USA: CDC, 1987; World Health Organization (WHO), *Mechanism of Action, Safety, and Efficacy of Intrauterine Devices*, Technical Report, Geneva: WHO, 1987, No. 753; and Hatcher RA et al., *Contraceptive Technology*, 16th ed., New York: Irvington Publishers, 1994.
4. Program for Appropriate Technology in Health (PATH) and Population Council, *The Copper T 380A IUD: A Manual for Clinicians*, second ed., Seattle, WA, USA: PATH, 1989.
5. Janowitz B et al., 1994, op. cit. (see reference 1).
6. Foreit J et al., 1998, op. cit. (see reference 1).
7. Consejo Nacional de Población, *La Demanda de Servicios de Salud en Mexico*, Mexico City: Consejo Nacional

de Población, 1995.

8. Secretaría de Salud, Para la planificación familiar en la atención primaria de la salud, *Diario Oficial de la Federación*, Norma Técnica, Mexico City: Secretaría de Salud, 1986, No. 22.
9. Secretaría de Salud and Consejo Nacional de Población, 1996, *Análisis de la Situación del Programa de Planificación Familiar Según Datos de la Encuesta Nacional de Planificación Familiar*, Mexico City: Secretaría de Salud and Consejo Nacional de Población, 1996.
10. Cárdenas C et al., 1996, op. cit. (see reference 1).
11. Unpublished 1992 service statistics, Mexican Social Security Institute (IMSS): Mexico City, 1993.
12. Cárdenas C et al., 1996, op. cit. (see reference 1).
13. Subdirección General Médica, Jefatura de Servicios de Salud Reproductiva y Materno Infantil, IMSS, *Manual Para el Uso de la Metodología Anticonceptiva*, Mexico City: Subdirección General Médica, Jefatura de Servicios de Salud Reproductiva y Materno Infantil, IMSS, 1994.

Resumen

Contexto: En algunos lugares, los clínicos generalmente programan visitas de seguimiento para las usuarias del DIU, aunque no se ha hecho un esfuerzo considerable para comparar los beneficios de salud que aportan estas visitas regulares y los costos que estas representan para los programas.

Métodos: En un estudio prospectivo realizado en ocho clínicas del Instituto Mexicano de Seguridad Social, se les solicitó a 1.713 nuevas usuarias del DIU que regresaran para realizar dos o cuatro visitas después de los primeros 12 meses de haberse insertado el dispositivo. Para calcular los beneficios de salud y los costos de cada uno de los sistemas de dos o cuatro visitas, se recopilaron datos sobre la frecuencia de las diversas intervenciones médicas y el costo del trabajo y de los materiales.

Resultados: De las aproximadamente 2.000 visitas realizadas en total, 235 del sistema de cuatro visitas y 159 del de dos visitas estuvieron relacionadas con intervenciones médicas para tratar condiciones serias; 53 y 29, respectivamente, fueron visitas programadas para mujeres que no tenían síntomas pero que consideraron que requerían de atención médica. Suponiendo que el programa suministra aproximadamente 250.000 DIUs por año, el costo ascendería a un total de \$1,7 millones para el sistema de cuatro visitas y de \$900.000 para el de dos visitas; el programa de cuatro visitas generaría 8.387 más visitas que requerirían intervenciones médicas que el sistema de dos visitas, a un costo de \$48 por visita.

Conclusiones: Las visitas adicionales de seguimiento ofrecen una oportunidad para diagnosticar y tratar problemas y por lo tanto ofrecen una mayor seguridad para las usuarias del DIU. Sin embargo, el sistema de cuatro visitas cuesta mucho más que el método de solamente dos visitas.

Résumé

Contexte: Dans certains contextes, les cliniciens prévoient généralement des visites de suivi pour les utilisatrices du stérilet, mais la comparaison des avantages de visites répétées par rapport aux coûts encourus par les programmes n'a jamais été examinée en profondeur.

Méthodes: Dans une étude prospective menée dans huit cliniques de l'Institut mexicain de la sécurité sociale, 1.713 nouvelles utilisatrices du stérilet ont été invitées à revenir pour deux ou quatre visites durant les 12 premiers mois suivant l'insertion. Afin d'estimer les avan-

tages médicaux et les coûts de chaque approche, des données ont été recueillies sur la fréquence de diverses interventions médicales et sur les coûts de main-d'œuvre et de matériel.

Résultats: Des quelque 2.000 visites dénombrées au total, 235 et 159 de celles relevant, respectivement, de l'approche à quatre ou à deux visites ont impliqué des interventions médicales de traitement de conditions graves; 53 et 29, respectivement, se sont avérées des visites prévues de femmes asymptomatiques, mais cependant diagnostiquées comme requérant des soins. Si l'on considère que le programme fournit environ 250.000 stérilets par an, les coûts

s'élèveraient à un total de 1,7 millions de dollars pour l'approche à quatre visites, et de 900.000 dollars pour celle à deux visites. L'approche à quatre visites générerait 8.387 visites avec intervention médicale de plus que l'approche à deux visites, au coût de 48 dollars la visite.

Conclusions: Les visites de suivi supplémentaires permettent le diagnostic et le traitement des problèmes rencontrés, assurant dès lors une meilleure sécurité aux utilisatrices du stérilet. L'approche à quatre visites est néanmoins beaucoup plus onéreuse que celle limitée à deux visites.

Acknowledgment to Reviewers

The editors wish to express their appreciation to the following reviewers for their assistance during 1998 in evaluating material for International Family Planning Perspectives:

Carla AbouZhar	Francis Dodoo	Eric R. Jensen	Indra Pathmanathan
Rogaia Mustafa Abusharaf	Peter J. Donaldson	Brooke R. Johnson	Robert D. Retherford
Donald J. Adamchak	Thomas E. Dow, Jr.	Vasanth K. Kandiah	Ann P. Riley
Jacob A. Adetunji	Alex Chika Ezeh	Karungari Kiragu	Arodys Robles
Sajeda Amin	Peter Fajans	Erik Klijzing	Gabrielle Ross
Mohamed Ayad	Mahmoud F. Fathalla	John E. Knodel	John A. Ross
Stella Babalola	James R. Foreit	Michael A. Koenig	Farzaneh Z. Roudi
Stan Becker	Karen Foreit	Susana Lerner Sigal	Naomi Rutenberg
Ruth R. Berg	Alfredo L. Fort	Ruth E. Levine	Lois A. Schaefer
Jane T. Bertrand	Anastasia J. Gage	Cynthia B. Lloyd	Florina Serbinescu
Ann E. Biddlecom	Sally Girvin	Abn Maggwa	Sagri Singh
John P. Bongaarts	Howard I. Goldberg	Deborah Maine	Leslie Snyder
Katherine L. Bourne	Daniel M. Goodkind	Paulina K. Makinwa-	Alan Spruyt
John B. Casterline	Philip Guest	Adebusoye	John Starback
Teresa Castro Martín	Ralph Hakkert	Michael T. Mbizvo	Karen Stein
Diane Civic	Karen Hardee	Carmen McFarlane	Amy Ong Tsui
John G. Cleland	Timothy B. Heaton	Dominique A. Meekers	Leela Visaria
Francine M. Coeytaux	David Hubacher	Amir H. Mehryar	Victoria M. Ward
Barney Cohen	Dale E. Huntington	Barbara S. Mensch	Susan Cotts Watkins
Siân L. Curtis	Zahid Huque	Vinod K. Mishra	Mary Beth Weinberger
Sonalde Desai	Shireen J. Jejeebhoy	Mark R. Montgomery	Su'ad Bashir Yusuf
