# **ARTICLES**

# Contraceptive Discontinuation in Six Developing Countries: A Cause-Specific Analysis

By Mohamed Ali and John Cleland

A descriptive analysis of contraceptive discontinuation, based on Demographic and Health Survey data from six countries with high levels of contraceptive use, shows that about one-third of couples stop use of their method within 12 months and about half do so within 24 months. IUD users are the least likely to stop using their method, with 82–89% of users persisting after one year and 65–80% continuing at the end of two years. Levels of discontinuation of other modern methods are similar to those of traditional methods, but the reasons for discontinuation vary. For hormonal contraceptives and the IUD, health concerns (including side effects) are the most common reason. For withdrawal and periodic abstinence, accidental pregnancy is the dominant reason. Women using the pill or the IUD are more likely to continue use if they have attained their desired family size. However, analysis of pill data indicates that education and residence have little or no influence on levels of discontinuation. (International Family Planning Perspectives, 21:92–97, 1995)

ne of the significant advances of the Demographic and Health Survey (DHS) program over its predecessor, the World Fertility Survey, is the detailed information on recent episodes of contraceptive use that is routinely gathered in countries characterized by relatively high levels of overall use. These data permit, for the first time, cross-national assessments of contraceptive discontinuation and its causes.

This new information is particularly welcome because few nationally representative studies of the ability, or willingness, of clients to persist with contraceptive use have been conducted in the last decade or so. In the early years of family planning programs, national follow-up surveys of family planning acceptors were a routine component of monitoring and evaluation.\* Their demise can be attributed to two main developments—the decline in use of the IUD and the rise in new ways of measuring program effectiveness.

The IUD, the dominant method of the

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1960s, has been eclipsed in many countries by permanent methods, for which continuation is not an issue, and by the pill. The IUD is amenable to studies of continuation: Its acceptance takes the form of an unambiguous clinical procedure performed by medical or paramedical staff, usually in a clinic. Thus, the maintenance of registers of acceptors, which provides a sampling frame for the investigation of continuation, is relatively straightforward.

In contrast, the act of accepting oral contraceptives is not marked by any precise clinical event and is by no means confined to the structured setting of clinics and health centers. The proliferation in the 1980s of social marketing and community-based distribution schemes doomed any attempts to maintain complete registers of acceptors of the pill, thus preventing large-scale follow-up surveys of clients.

The second reason concerns the development of new methods of estimating the demographic impact of family planning programs. Earlier methods, based on numbers of acceptors, their characteristics and levels of continuation, have given way to simpler ones based on survey estimates of contraceptive prevalence. Increasingly, the achievements of family planning programs are measured by repeated surveys rather than by service statistics on acceptors, com-

plemented by estimates of continuation.

However, the study of discontinuation and its causes clearly remains important for program guidance. Although willingness to persevere with a method does not necessarily imply satisfaction, high discontinuation rates are usually a sign of discontent with the method or the service. Similarly, low use-effectiveness suggests that counseling may be inadequate. The identification of large variations in continuation between users of different methods or between different client types may be useful to program managers. In this article, we present a descriptive account of method-specific discontinuation probabilities, as well as the reasons for stopping, for six countries that participated in the first phase of the DHS program.

# **Data and Methods**

The DHS Phase I questionnaire for highprevalence countries gathered data on episodes of use occurring within birth intervals that ended in the five years preceding the survey date, as well as on contraceptive knowledge, ever-use, availability and acceptability. For the open interval (i.e., since the last live birth), it probes for details about the current episode of use and about any preceding episode. For closed birth intervals, the questionnaire permits the identification of a maximum of two episodes, but collects details only for the last episode. These details include the method used, the duration of use and the main reason for stopping.

To determine the reason for discontinuation, respondents are first asked whether they became pregnant while using the method. Positive answers are classified as instances of method failure. Respondents who answer negatively are asked a second, open-ended question: "What was the main

\*See, for example: C. Tietze and S. Lewit, "Evaluation of Intrauterine Devices: Ninth Progress Report of the Cooperative Statistical Program," *Studies in Family Planning*, No. 55, July 1970. reason you stopped using (method)?" Preprinted response categories typically include, among others: to get pregnant, infrequent sex, partner disapproval, health concerns, lack of access or availability, cost and fatalism. These data permit analysis of discontinuation for specific methods and for specific reasons.

This study is restricted to episodes that started within the five years preceding the survey.\* Because the calendar dates of the start of episodes located within closed birth intervals were not ascertained, the selection procedure was not always straightforward. For periods of use occurring between births that straddled the five-year boundary, we calculated a range of possible starting dates, taking into account the reported duration of use and the nine-month gestation for the more recent birth. If the midpoint of this range fell within the 60-month window, the episode was included. In practice, this imprecision is unimportant because it affects only a small minority of episodes.

The omission of complete information for closed birth intervals with more than one episode of contraceptive uset and the overall quality of retrospectively reported data are of greater concern. Experimental evidence from Peru and the Dominican Republic suggests that the data-capture strategy followed in Phase I of the DHS results in underestimation of discontinuation rates because of underrecording and underreporting of past episodes of use.<sup>2</sup> The pronounced heaping of episode durations also implies relatively poor precision, which is to be expected given the long recall period. Furthermore, the reliability of stated reasons for discontinuation is unknown, but may well be low because of the motivational complexity that probably underlies both conscious decisions to stop using a method and passive decisions not to obtain further supplies of a method.

All these considerations argue for considerable caution in interpretation of results. However, there is no reason to believe that discontinuation probabilities calculated from these data are not broadly correct or that large differences among methods and countries are not valid. As we will show, the key results are highly plausible.

The analysis is episode-based rather than woman-based. We used life-table techniques (SPSS statistical package) because of the need to include both completed and ongoing episodes.‡ For the investigation of cause-specific discontinuation, we constructed single-decrement life tables, which yield hypothetical probabilities of cause-specific discontinuation in the absence of competing causes (usu-

Table 1. Contraceptive prevalence among currently married women, by method, and other indicators of reproductive behavior; all according to country, Demographic and Health Surveys, 1987–1988

Method and indicator	Morocco	Tunisia	Egypt	Ecuador	Indonesia	Thailand
METHOD						
All	35.8	49.8	37.8	44.3	47.7	65.5
Pill	22.9	8.8	15.3	8.5	16.1	18.6
IUD	2.9	17.0	15.8	9.8	13.2	6.9
Injectable	0.3	8.0	0.1	0.7	9.4	8.5
Vaginal	0.1	1.0	0.4	1.2	0.0	0.0
Condom	0.5	1.3	2.4	0.6	1.6	1.1
Sterilization	2.2	11.5	1.5	14.9	3.3	28.5
Periodic abstinence	2.3	6.3	0.6	6.1	1.2	0.9
Withdrawal	3.1	2.4	0.5	2.0	1.3	0.9
Other	1.5	0.7	1.3	0.4	1.8	0.1
INDICATOR						
Total fertility rate (1985–1990)	4.8	3.9	4.5	4.1	3.5	2.6
% female adult literacy (1992)	40	59	35	85	77	92
Program effort score (1989)	57	69	66	58	80	80

ally referred to as gross rates).

For the study, we selected six DHS Phase I surveys that had used the questionnaire for high-prevalence countries (Table 1). Our main criterion was the existence of sufficient numbers of users of reversible methods to permit comparisons among methods for each country. The countries chosen are in no way representative of all high-use developing countries; geographically, three of the six are in North Africa. The overall level of current use in 1987 or 1988, when fieldwork was conducted, varied from 36% to 66%, and the method mix was equally diverse. Sterilization accounted for nearly half of all users in Thailand but was very rare in Indonesia, Morocco and Egypt. In Indonesia and Morocco, the dominant method was the pill; in Tunisia, it was the IUD; and in the remaining three countries, the pill and IUD. All other methods were used by fewer than 10% of married couples.

All six countries had well-developed family planning programs at the time of the survey, although their rating on the 1989 Mauldin-Ross index of effort varied from very strong (Thailand and Indonesia) to moderate (all others).<sup>3</sup> Adult female literacy, probably the single most important socioeconomic influence on reproductive behavior, ranged from 40% in Morocco to 92% in Thailand.

#### Results

The main results are summarized in Table 2 (page 94), which shows the number of episodes on which the analyses were based, and in Figure 1 (page 95). We set a lower limit of 100 episodes, because life-table estimates based on smaller numbers would be unreliable. When individual methods did not provide enough episodes to reach this threshold, we combined them into broader categories (e.g., other modern methods, traditional methods). All six countries yield-

ed enough episodes of pill and IUD use for separate analysis. In four countries, use of periodic abstinence was common enough for method-specific investigation, but the number of countries with enough episodes of use for the other main methods fell to three for withdrawal, two for condoms and two for injectables. Table 2 shows cumulative discontinuation probabilities at 12 months and at 24 months for all causes and for each of four main causal categories. (The cause-specific probabilities do not sum to the all-cause probability because we used a single-decrement approach.)

#### Discontinuation Rates

If one focuses on discontinuation for all methods combined, a surprisingly consistent pattern emerges, despite the diversity of settings. Typically, about one-third of couples stopped using their method within one year of acceptance and about half did so within two years. Given the wide range of contraceptive prevalence and female adult literacy rates in these countries, it is fair to conclude that rapid discontinuation of methods is by no means concentrated in populations where levels of adult education or overall use are low. The only appreciable departure from this generalization occurred in Indonesia, where use of

‡Some researchers terminate analyses at a point three months before the survey to allow for possible underreporting of first-trimester pregnancies among contraceptive users. We did not follow this procedure because its effect on estimated failure rates is small and because the main focus in the paper is on discontinuation for all causes.

<sup>\*</sup>Episodes that started more than five years before the survey would be more likely to be captured if their duration was long. Hence, the inclusion in the analysis of the relatively small number of these episodes would have introduced a selection bias.

<sup>†</sup>This omission was rectified in the second round of DHS enquiries, when complete five-year histories of contraceptive use were obtained. The scope for useful analysis is greatly increased by this improved data collection strategy.

Table 2. Cumulative 12- and 24-month probabilities of discontinuation per 100 episodes of method use, by country and method, according to cause

	No. of	All causes		Desire f	Desire for pregnancy		Method failure		Health concerns		Other	
	episodes	12	24	12	24	12	24	12	24	12	24	
MOROCCO All methods Pill IUD Other modern methods* Periodic abstinence Withdrawal	<b>2,914</b> 2,050 182 100 237 232	<b>35.2</b> 35.1 17.5 49.8 44.5 30.8	<b>53.5</b> 53.5 34.5 68.2 65.0 50.6	9.8 10.4 1.6 19.3 13.8 7.4	18.4 18.6 5.1 31.7 26.4 19.2	12.2 9.1 4.2 20.6 29.3 14.6	<b>20.5</b> 16.3 9.4 28.7 45.9 25.1	11.3 14.1 8.2 7.1 1.5 1.3	18.6 22.8 17.1 11.5 1.5	7.7 7.2 4.6 15.7 7.5 11.3	12.1 11.5 8.0 24.8 10.7 18.2	
TUNISIA All methods Pill IUD Vaginal methods Other modern methods† Periodic abstinence Withdrawal	<b>2,289</b> 662 855 144 133 322 137	29.5 40.6 14.7 63.9 41.4 26.1 33.1	<b>45.6</b> 58.5 30.2 83.6 50.8 42.6 47.3	5.8 8.8 2.2 11.4 11.3 7.2 6.0	12.3 18.0 6.6 25.2 18.0 14.9 8.5	8.4 6.7 2.2 41.6 6.5 14.5 15.5	13.0 9.0 4.9 50.8 6.5 24.4 28.3	11.5 23.3 8.5 10.9 14.1 0.0 0.0	18.7 36.3 16.2 20.4 14.1 0.0 0.0	<b>7.5</b> 8.9 2.4 21.6 17.6 6.7 15.7	12.2 12.6 6.3 43.8 25.2 10.8 19.7	
EGYPT All methods Pill IUD Condom Other modern methods‡ Breastfeeding Traditional methods§	<b>4,496</b> 2,285 1,486 265 128 180 134	28.0 36.5 10.9 35.1 58.7 11.0 41.9	48.8 59.4 23.8 53.4 80.0 56.5 63.7	5.3 7.5 2.3 5.3 13.7 0.8 5.4	13.8 18.6 6.4 13.4 23.2 14.9 22.2	7.1 7.9 2.0 16.4 14.0 5.6 30.3	14.2 16.5 4.1 29.4 33.7 21.1 41.9	12.4 19.1 5.0 1.3 24.7 0.3 1.3	21.3 30.8 12.1 2.5 37.7 5.4 1.3	6.7 8.0 1.5 16.9 26.1 4.7 10.7	11.9 13.5 3.5 21.5 36.4 31.3 19.6	
ECUADOR All methods Pill IUD Other modern methods* Periodic abstinence	<b>1,348</b> 506 327 177 245	<b>34.6</b> 37.0 13.6 62.4 35.3	<b>48.0</b> 55.2 19.9 75.8 47.9	<b>5.9</b> 7.8 1.1 12.8 5.1	10.7 14.6 1.1 24.3 10.1	11.6 6.4 3.8 23.6 21.5	17.6 13.2 6.7 28.7 31.2	9.8 18.9 3.9 7.1 0.8	<b>15.8</b> 29.8 7.0 9.6 0.8	12.8 9.9 5.6 39.2 12.2	16.6 13.8 6.7 51.1 15.0	
INDONESIA All methods Pill IUD Injectable Condom Periodic abstinence Withdrawal Herbs	6,183 2,308 1,246 1,637 272 190 217 152	25.1 26.2 12.4 24.9 42.0 34.9 46.7 41.1	<b>40.6</b> 43.2 21.4 43.9 57.5 57.3 61.7 60.3	7.5 9.3 2.1 5.5 15.8 13.7 21.0 18.5	14.4 18.6 5.0 10.9 26.9 25.6 36.3 33.7	2.8 2.2 2.1 1.1 5.7 12.2 8.9 7.2	4.9 3.4 4.4 2.2 9.4 25.8 16.7 12.2	8.7 10.2 5.8 11.6 4.0 0.9 1.2 6.7	14.0 15.9 8.8 20.5 7.8 2.3 1.2 7.6	8.7 6.3 3.0 9.0 23.9 13.4 25.0 17.2	15.1 14.3 5.1 19.1 31.9 20.8 26.9 26.2	
THAILAND All methods Pill IUD Injectable Condom Traditional methods§	<b>3,407</b> 1,716 429 612 210 183	<b>36.3</b> 36.2 15.2 36.6 72.5 42.0	<b>50.4</b> 49.5 23.4 56.5 81.5 56.5	14.1 15.4 0.8 9.5 50.8 21.5	23.0 24.6 5.0 19.1 61.6 33.6	3.9 3.2 3.7 1.1 8.5 19.2	<b>5.4</b> 4.5 4.0 2.5 18.4 25.3	6.8 6.1 3.6 11.8 0.0 0.4	10.9 8.8 7.1 20.8 0.0 1.3	17.1 17.0 7.9 19.6 38.7 8.1	23.5 23.1 9.6 31.1 40.7 11.2	

\*Vaginal methods, injectable and condom. †Injectable and condom. ‡Vaginal methods and injectable. §Periodic abstinence and withdrawal. Note: Episodes are weighted by sample weight where necessary.

reversible contraceptives is more persistent.

The results for specific methods are also somewhat unexpected. On commonsense grounds, we might anticipate that continuation rates for the intrinsically more effective modern hormonal methods and the IUD would be higher than those for traditional methods such as withdrawal and periodic abstinence. This expectation is borne out in the case of the IUD. In all six countries, users of the IUD were more likely than users of other methods to be continuing both at 12 months and at 24 months after acceptance. In many cases, the contrast between the continuation rate for the IUD and those for other methods is remarkable. In Thailand, for instance, only 23% of episodes of IUD use ended within 24 months, compared with 50% of episodes of pill use. In Egypt, the corresponding figures were 24% and 59%. The difference cannot be explained by the possibility that IUD use is confined to a small minority of women with exceptionally high motivation. The results in settings where IUD use is very common (Tunisia, Egypt and Indonesia) are broadly similar to those in which it is rare (Morocco and Thailand).

In contrast to IUD users, users of highly effective hormonal methods were almost as likely to stop use as were couples who relied on periodic abstinence and withdrawal. Typically, 30–40% of users of each of these methods had discontinued within a year and 50–60% had done so within two years. Pill users in Indonesia, whose rate of discontinuation was very low, were the sole exception. In Indonesia and Thailand, where it is possible to compare pill users with users of injectables, there was no appreciable difference between the two groups in the likelihood of discontinuation.

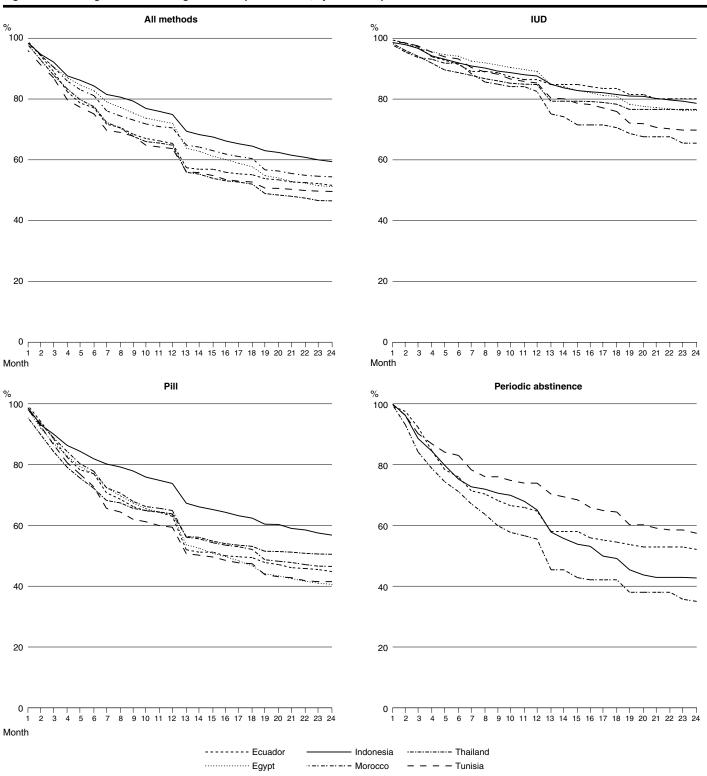
Probabilities of discontinuation for condom use, which we could calculate for only

three countries, were the least amenable to broad generalization. In Thailand, the proportion of condom acceptors who continued to use the method declined sharply in the early months and fell to only 18% by the end of two years. In Egypt and Indonesia, however, continuation of condom use was more common (43–47% after two years). In Egypt, the continuation rate for the condom closely paralleled the rate for the pill, but in Indonesia it was considerably lower than the rate for either the pill or injectables.

#### Causes of Discontinuation

Reasons given for discontinuation should provide further insights into the method-specific and country-specific results. The DHS coding of stated reasons was rather detailed and included several items of direct practical relevance to program managers. Preliminary investigation indicated that three main reasons were dominant: de-

Figure 1. Percentage of women using a contraceptive method, by month elapsed since initiation of method use.



sire for a child, method failure and health concerns (including side effects). Problems of availability and access were rarely mentioned, which is perhaps surprising in view of anecdotal accounts of frequent shortages in some countries. For instance, in Tunisia and Morocco, fewer than 2% of episodes

ended for this reason. The proportions of respondents mentioning cost as a reason for stopping were even smaller. Accordingly, we combined all these specific reasons with other, unspecified answers to form a fourth, miscellaneous category.

It might be argued that contraceptive dis-

continuation because of a desire for a child should be analyzed differently, or separately, from other reasons, which usually imply some problem or dissatisfaction. However, exploratory analysis (not shown) indicated that it would be incorrect to assume that stated reasons for discontinuation form mutually exclusive categories. The reported method failure was almost invariably higher among young women, who had not yet reached their desired family size, than it was among older women, who frequently had already reached or exceeded their preferred number of children. This pattern reflects in part the higher fecundability of young women but also suggests that strength of motivation is an important influence on the rigor with which methods are used and that no clear-cut distinction can be made between method failure and desire for another child.\* For this reason, it is preferable to analyze all reasons in a similar way.

Health concerns, including side effects, were the most common cause of discontinuation. For all methods combined, about 10% of episodes were terminated within the first year for this reason and about 20% were ended within two years. As one would expect, there were huge variations among methods. Users of periodic abstinence, withdrawal, the condom, herbs, breastfeeding and other traditional methods were unlikely to stop because of health concerns, but such concerns were a major reason for giving up hormonal methods. In Tunisia, Egypt and Ecuador, about 20% of all hormonal method users stopped for this reason by the end of the first year and about 30% did so within two years. Discontinuation on health grounds was less common in the other three countries, but nevertheless amounted to about 20% after 24 months. In Thailand and Indonesia, women using injectables were even more likely to discontinue for this reason than were pill users.

The probability of discontinuation for health-related reasons was much higher among IUD users than among users of periodic abstinence or withdrawal but, typically, it was much lower than the probability among users of hormonal methods. In Egypt, for instance, only 5% of IUD acceptors had stopped for this reason by the end of the first year, compared with 19% of pill users.

Despite the caveats mentioned earlier about method failure, the results are highly plausible. For all methods combined, the reported probability of becoming pregnant while using a method varied widely among countries. At the end of 12 months, the cumulative proportion ranged from 3–4% in Indonesia and Thailand to about 12% in Morocco and Ecuador; by the end of 24 months, the span had widened to 5–21%. The method mix in specific countries was an impor-

Table 3. Cumulative 12-month probabilities of discontinuation per 100 episodes of method use, by method and characteristics of users, according to country

Method and characteristic	Morocco	Tunisia	Egypt	Ecuador	Indonesia	Thailand
FAMILY SIZE						
IUD						
Actual < desired	13	21	20	21	17	18
Actual = desired	13	10	8	10	5	12
Actual > desired	19	6	7	7	7	13
Nonnumeric answer	32	23	10	†	23	†
Pill						
Actual < desired	43	47	41	46	32	42
Actual = desired	26	32	30	21	16	22
Actual > desired	27	36	28	30	21	20
Nonnumeric answer	37	†	39	Ť	26	†
Normaniene answer	07	ı	00	ı	20	
EDUCATION						
Pill						
None	36	42	42	t	22	40
Primary	33	41	33	36	27	35
≥Secondary	31	33	33	38	27	40
Ecocondary	01	00	00	00		.0
RESIDENCE						
Pill						
Rural	40	42	42	41	25	36
Urban	30	40	32	35	30	37

†Insufficient numbers for analysis

tant factor, but not the major one; the range for individual methods is almost as wide. For example, pill failure rates are about three times as high in Morocco, Egypt and Ecuador as they are in Indonesia or Thailand.

One major explanation for the surprising similarity in overall continuation levels for hormonal methods and traditional methods is that, in each country, the impact of health concerns and side effects on continuation of hormonal methods was balanced by the impact of method failure on continuation of traditional methods. Probabilities of failure were high among users of periodic abstinence, withdrawal or other traditional methods in every country except Indonesia. In all cases, these probabilities were much higher than those for the pill. In Morocco and Ecuador, more than 20% of women practicing periodic abstinence became pregnant within a year, while in Tunisia and Indonesia those figures were lower (15% and 12%, respectively) but were nevertheless appreciable. In Tunisia, failure rates for withdrawal were similar to those for periodic abstinence but in Morocco and Indonesia, they were substantially lower. Reported failure with IUDs and injectables was low at all sites.

Understandably, few couples stated that they had discontinued their method in the early months of use because they wanted to have another child. The cumulative 12-month probability of discontinuation for that reason ranged from 5% to 10%, except in Thailand, where it reached 14%. After 24 months, however, desire for pregnancy had become more common, with the probability of discontinuation for that reason ranging from 11% to 23%. No system-

atic method-specific differences are apparent, except among IUD users, who were particularly unlikely in all six countries to have the device removed because they wanted to have another child.

#### Personal Traits and Discontinuation

Table 3 addresses the issue of motivation as a determinant of pill and IUD continuation. Respondents were divided into three main groups, according to whether their number of living children at the start of the episode was less than, equal to or greater than their desired family size. The first group may be considered to be using contraceptives to space births and the latter two, to end childbearing. As one would expect, cumulative discontinuation for both methods tended to be higher among respondents who had not yet attained their desired family size at the start of the episode than it was among those who had already reached or exceeded their desired family size.

Whether contraception was being practiced to end childbearing or to space births, the IUD was used for much longer durations than was the pill. As the table shows, among women who probably wanted no more children, 20–36% of pill users discontinued within 12 months of acceptance, compared with 6–19% of IUD users. It is unclear, however, whether this contrast reflects differing intensities of feeling about fertility regulation (not measured in the DHS), the fact that IUD discontinuation requires a conscious decision and a clinical procedure, or some other reason.

We conducted a more detailed analysis for the pill because it was the only method with enough episodes of use for all six coun-

<sup>\*</sup>For further evidence that strength of motivation influences failure rates, see: E. F. Jones, L. Paul and C. F. Westoff, "Contraceptive Efficacy: The Significance of Method and Motivation," *Studies in Family Planning*, **11**:39–50, 1980.

tries. Table 3 shows differentials in 12month all-cause cumulative discontinuation per 100 episodes of pill use, by woman's education and urban-rural residence. Educational differentials are of particular interest because there is a widespread belief that the pill is unsuitable for women with little or no schooling. We found that pill continuation varied little between women with primary schooling and those with more education in any country but Tunisia. In three countries for which the comparison is possible, uneducated women were more likely to stop using the pill than were women with at least a primary education; the difference was trivial in Morocco and Tunisia, but in Egypt it was appreciable. In Indonesia, women with no schooling were the least likely of the educational groups to discontinue. Clearly, no simple generalization is possible about the ability or willingness of uneducated women to use oral contraceptives successfully. Nevertheless, the results are generally encouraging because there appears to be little need for any radical review of services and counseling for uneducated women.

Urban-rural differences are of practical relevance because of the possibility that access problems in rural areas may reduce continuation. Although the DHS respondents rarely mentioned availability and access as the main reason for discontinuation, problems of this nature may well act synergistically with other reasons to discourage persistent use. The data in Table 3 suggest that pill discontinuation in rural areas differed little from that in urban areas for four of the six populations. Only in Morocco and Egypt was there an appreciable urban-rural contrast.

### **Policy Implications**

The main implications of this descriptive analysis of DHS data on contraceptive discontinuation are clear. First, the results reinforce familiar arguments<sup>4</sup> that good family planning programs must offer a range of methods so that clients who are dissatisfied with one method can switch easily to another. Program managers should anticipate that about one in three women who begin using a hormonal contraceptive and about one in 10 IUD users will stop within a year and a substantial proportion will require an alternative method to avoid an unwelcome pregnancy.

A second main implication concerns the role of so-called natural methods (particularly periodic abstinence and withdrawal) in family planning programs. Levels of reported failure among women using these methods were very high in all six study

countries, although not necessarily higher than those among women using the condom or another barrier method. For couples who want no more children and who live in countries where access to safe abortion is limited, the high risk of failure is a critical disadvantage. In other situations, however, the contributions of these methods can be acknowledged with fewer reservations. The results presented above suggest that 40–50% of couples are still using periodic abstinence or withdrawal after a span of 24 months; this level of overall continuation is no worse than levels among users of hormonal methods.

Third, in all six study sites, users of the IUD were much more likely to continue using their method than were users of other methods. IUD users were less likely than users of hormonal methods to stop because of health or side effects and were less likely to report method failure. These apparent advantages of the IUD can be attributed in part to the characteristics of women who choose this method, in particular the strength of their commitment to pregnancy avoidance. However, the contrasts in overall continuation are so large that it is implausible to attribute them entirely to factors of self-selection. The results reported here can be used legitimately in support of more active promotion of the IUD. Such support would be particularly appropriate in settings where the IUD has never been commonly used or has fallen into disrepute because of earlier insensitive attempts to popularize it, and where protection against infection by HIV and other sexually transmitted diseases is not a high priority.

The high failure rates for methods other than the IUD carry obvious implications for policies on induced abortion. The DHS-based evidence supports the views of those who argue that access to safe abortion should be part of any comprehensive family planning service. Finally, the more detailed analyses for oral contraceptives suggest that this method can be used as successfully by rural and uneducated women as by urban and better educated women.

#### References

- 1. J. Bongaarts, "The Prevalence Method," in Methodology of Measuring the Impact of Family Planning Programmes on Fertility, Manual IX Addendum, Sales No. ST/ESA/SER. A/Add.1, United Nations, New York, 1986.
- 2. N. Goldman, L. Moreno and C. F. Westoff, "Collection of Survey Data on Contraception: An Evaluation of an Experiment in Peru," *Studies in Family Planning*, 20:147–157, 1989; and C. F. Westoff, N. Goldman and L. Moreno, *Dominican Republic Experimental Study: An Evaluation of Fertility and Child Health Information*, Princeton University, Office of Population Research, Princeton, N. J., U. S. A., and Institute for Resource Development/Macro Systems, Columbia, Md., USA, Aug. 1990.

- **3.** W. Parker Mauldin and John A. Ross, "Family Planning Programs: Efforts and Results, 1982–89," *Studies in Family Planning*, **22**:350–367, 1991.
- 4. A. K. Jain, "Fertility Reduction and the Quality of Family Planning Services," *Studies in Family Planning*, 20:1–16, 1989.

#### Resumen

Un análisis descriptivo sobre la suspensión del uso de anticonceptivos realizado en base a datos recabados por las Encuestas Demográficas y de Salud de seis países que presentan niveles elevados de uso de anticonceptivos, revela que aproximadamente un tercio de las parejas dejan de utilizarlos dentro de los 12 meses de uso y la mitad en un período de 24 meses. Las usuarias del DIU son las menos propensas a abandonar el uso de un método—82-89% continúan utilizándolo después de un año y del 65-80% siguen haciéndolo a los dos años. Los niveles de suspensión del uso de otros métodos modernos son similares a los que presentan los métodos tradicionales, aunque varían las razones por las cuales se abandona esta práctica. La razón más comúnmente esgrimida para abandonar el uso de anticonceptivos hormonales y el DIU, es la salud (incluidos los efectos secundarios). El embarazo inesperado es la razón principal por la cual se abandonan los métodos de el retiro y la abstinencia periódica. Las mujeres que usan la píldora o el DIU son más proclives a continuar usándolos si ya han logrado el número deseado de hijos. Sin embargo, el análisis de los datos relacionados con el uso de la píldora indica que los factores de educación y lugar de residencia influyen poco o nada en los niveles de suspensión del uso del dicho método.

## Résumé

Une analyse descriptive de l'abandon de la contraception, basée sur des données d'Enquêtes démographiques et de santé provenant de six pays avec des niveaux élevés d'utilisation de contraceptifs, révèle qu'environ le tiers des couples cessent d'utiliser leur méthode dans un délai de 12 mois et environ la moitié le font dans un délai de 24 mois. Les porteuses de stérilet étaient les moins susceptibles de cesser d'utiliser leur méthode, 82% à 89% des utilisatrices persistant après un an et 65% à 80% continuant au terme de deux ans. Les niveaux d'abandon d'autres méthodes modernes sont similaires à ceux de méthodes traditionnelles, mais les motifs de l'abandon varient. En ce qui concerne les contraceptifs hormonaux et le stérilet, les questions de santé (y compris les effets secondaires) constituent le motif invoqué le plus souvent. Pour le retrait et l'abstinence périodique, la grossesse accidentelle est le motif dominant. Les femmes utilisant la pilule ou le stérilet sont plus susceptibles de continuer l'usage si leur famille a atteint la taille désirée. Cependant, une analyse des données sur la pilule révèle que l'instruction et la résidence exercent une influence limitée, voire même aucune, sur les niveaux d'abandon.