

Postabortion Contraceptive Services In Nepal Leave Room for Improvement

Greater efforts are needed to improve contraceptive counseling and provision after abortion in Nepal, finds a prospective cohort study conducted in 2011, a decade after the country legalized the procedure.¹ Overall, one-third of the women who underwent a legal abortion did not receive any information afterward on effective contraceptive methods (hormonal methods, the IUD, implants and female or male sterilization), and more than half did not receive such contraceptives. While about eight in 10 women who opted for the injectable or pill had used their chosen method six months after their abortion, only four in 10 who chose long-acting reversible contraceptives (LARCs) and fewer than one in 10 who chose sterilization had used those methods. Parous women had sharply elevated odds of having chosen and having used an effective method (odds ratios, 6.5 and 5.7, respectively), whereas women who were not living with their husband or partner had dramatically reduced odds (0.2 for each).

Study participants were women aged 16–35 who had just undergone a legal elective abortion at one of four reproductive health facilities in geographically diverse areas of Nepal. The facilities generally provided nonpermanent contraceptives at no cost, although some charged small fees for IUDs. After their abortion, women provided information about their social and demographic characteristics, contraceptive history and fertility plans, as well as about the abortion visit itself. They also indicated whether, at their abortion visit, they had received information on effective contraceptive methods, chosen an effective method and received a method. At a six-month follow-up interview, women reported whether they had used an effective method at any time since the abortion. The researchers computed frequencies of the women's characteristics and the four contraceptive outcomes, and performed bivariate and multivariate analyses to identify characteristics associated with each outcome.

At the time of their abortion, the 838 women studied were 26 years old, on average.

Most were married (97%) and had children (87%). About one-third had never used an effective contraceptive method. Fifty-nine percent did not want another child, 36% wanted to postpone childbearing for at least two years and 5% wanted a child within two years.

Overall, 66% of women received information about one or more effective contraceptive methods at their abortion visit; they were most commonly counseled about the injectable (52%) and pill (45%). Multivariate analyses indicated that women who did not live with their husband or partner had greatly reduced odds of receiving counseling (odds ratio, 0.2), and that women who had had a medication abortion were less likely to be counseled than were their counterparts who had had an aspiration abortion (0.5).

Sixty-two percent of women reported choosing an effective method at the abortion visit; most often they selected the injectable (32%) or pill (16%). The majority of those who did not choose an effective contraceptive said they opted not to do so because their husband or partner was away (37%) or they had sex infrequently (19%). In multivariate analyses, women had reduced odds of having chosen an effective method if they did not live with a husband or partner (odds ratio, 0.2) or had more than a primary education (0.5); moreover, the odds of having chosen a method fell with each additional year of age (0.9). Parous women and those who had received contraceptive information had elevated odds of having chosen an effective method (6.5 and 2.5, respectively).

Forty-four percent of all women reported receiving an effective method at their abortion visit; they most commonly received the injectable (28%) or pill (12%). In multivariate analyses, women had reduced odds of having received an effective method if they were not living with a husband or partner (odds ratio, 0.1), had more than a primary education (0.7) or had had a medication abortion (0.3); the odds also declined with increasing age (0.9). Women had an elevated likelihood of receiving an effective method if they were

parous (5.1), lived in a rural area (1.6) or had received information on these methods (2.2). The majority of women who chose the injectable or pill received their preferred method (85% and 78%, respectively); in contrast, only 40% of those who selected LARC (the IUD) or implant had one placed at that visit.

Of the 654 women interviewed six months after their abortion, 63% reported having used an effective contraceptive method at some time since the procedure; they most commonly had used the injectable (38%) or pill (22%). Women had reduced odds of having used an effective method if they were not living with a husband or partner (odds ratio, 0.2) or had more than a primary education (0.6); again, the likelihood fell with increasing age (0.9). Women had elevated odds of use if they were parous (5.7), had used an effective method prior to their abortion (1.9) or had received information on effective contraceptives (2.1). Among women who had selected a method at their abortion visit, the proportion who subsequently used their chosen method was higher among those who had chosen the injectable (88%) or pill (75%) than among those who had chosen a LARC (44%) or sterilization (5%). Roughly 40% of those who had initially selected a LARC or sterilization had relied on a different effective method during follow-up. Women who had not used their chosen method most commonly attributed their nonuse to having changed their mind about the method (46%), to medical or health reasons (18%) or to concerns about side effects (18%). On the other hand, 28% of women who had not chosen an effective method at their abortion visit had used one during follow-up, most often the pill (47%) or injectable (40%).

The study identifies important gaps in postabortion contraceptive care in Nepal and potentially modifiable correlates, according to the researchers. In particular, women who had had a medication abortion were less likely than other women to receive contraceptive information and supplies at their initial abortion visit, possibly because they needed

to wait for a return visit to receive a LARC or the injectable; the authors recommend that efforts be made to provide information and supplies at the initial abortion visit and to explore other strategies for improving provision. Study limitations include a possible lack of generalizability to other health facilities in Nepal, reliance on self-reported data, and the higher rate of loss to follow-up among women who did not choose or receive a method, the researchers note. "Improvements in postabortion counseling and provision are needed," they conclude. "Ensuring that women choosing long-acting and permanent contraceptive methods are able to obtain either them or interim methods is essential."—S. London

REFERENCE

1. Rocca CH et al., Postabortion contraception a decade after legalization of abortion in Nepal, *International Journal of Gynecology & Obstetrics*, 2014, 126(2):170–174.

A Fourth of Married African Women Have an Unmet Need for Contraception

A global analysis of Demographic and Health Survey (DHS) data suggests that in Africa, one in four married women of reproductive age have an unmet need for contraception.¹ On average, in the 31 African countries included in the study, 24% of married women had an unmet need; mean levels were lower in Asia (15%) and Latin America and the Caribbean (13%), though those regions were not as well represented by DHS data. The most frequently cited reasons for not using contraceptives were lack of regular sexual activity, cited by a third of women in Latin American and the Caribbean and Asia; concern about side effects and health risks, cited by one in four women in all three regions; and opposition to contraception, mentioned by a quarter of women in Asia and Africa. Lack of access was not a commonly cited reason for nonuse in Latin America or Asia, but was often mentioned in some African countries.

Recent estimates suggest that more than 220 million women in the developing world have an unmet need for modern contraceptive methods, and that meeting all of this need would prevent at least 54 million pregnancies annually. To examine levels of unmet need and reasons for nonuse of contraceptives, Sedgh and Hussain examined data from

51 DHS surveys conducted in developing countries between 2006 and 2013. Analyses were limited to married women of reproductive age (15–49), as many of the surveys did not include unmarried women or did not ask them about sexual activity. Women were considered to have an unmet need if they were fecund, did not want a child in the next two years (or ever) and were not using a modern or traditional method of contraception; those who were pregnant or experiencing postpartum amenorrhea were considered to have an unmet need if their current or recent pregnancy was unintended.

Thirty-one of the surveys were conducted in Africa, and together represented 74% of the continent's married women aged 15–49. Thirteen were conducted in Asia, representing 75% of women aged 15–49 in South Central, South Eastern and Western Asia; however, no DHS data were available for Eastern Asia. Finally, seven surveys were done in Latin American and the Caribbean; because these surveys represented only 19% of the region's reproductive-age women, the authors caution that the resulting aggregate data should not be considered representative.

Overall, the proportion of married reproductive-aged women who had an unmet need for contraception was 24% in Africa, 15% in Asia and 13% in Latin America and the Caribbean. Subregional estimates for Eastern Africa (26%), Middle Africa (26%), Western Africa (24%), South Central Asia (15%) and South-eastern Asia (14%) were similar to the corresponding regional estimates; the analysts did not calculate subregional estimates for other areas because the sample represented less than half of each subregion's population. Among individual countries, levels of unmet need were lowest in Colombia (9%) and Peru (10%), and highest in Sao Tome and Principe (38%), Ghana (36%) and Liberia (36%); it exceeded 25% in nearly two-thirds of African countries.

On average, women cited 1.2 reasons for not using contraceptives, though the researchers suspect that many women contended with additional barriers that they did not report. The prevalence of these reasons often varied widely by region. Infrequent or no sexual activity was cited as a reason for nonuse by a third of women in Latin American and the Caribbean (34%) and Asia (31%), but by only one in five women in Africa (19%). Concern about side effects and health risks was the most commonly mentioned reason

in Africa (28%), and among the most cited reasons in Latin America and the Caribbean (24%) and Asia (23%). One in four women in Asia (27%) and Africa (25%) said that they, their husband or both were opposed to contraception, but just one in nine women in Latin America and the Caribbean (11%) gave this reason.

Only 4–8% of women in the three regions attributed their nonuse to lack of access to contraceptives, but this reason was mentioned by 15% of women in Middle Africa and 10% of those in Western Africa. Similarly, while 10–13% of women in those two subregions said that they were unaware of any contraceptive methods, only 1–6% of those in the three main regions and in other subregions cited this reason.

Some reasons were cited particularly often in certain countries. Infrequent or lack of sexual activity was mentioned by 73% of women in Nepal and 58% of those in Bangladesh. Side effects and health concerns were an issue for half of women in Haiti and Cambodia (51% each), and opposition to contraception was a reason for nonuse for substantial proportions of women in Timor-Leste (68%), Pakistan (49%), Tajikistan (45%) and Haiti (36%). About one in five women in Benin, Congo, Cameroon, Côte d'Ivoire and Guinea (18–23%) said that lack of access contributed to their nonuse.

Additional analyses suggested that many of the women who were not using contraceptives because they considered themselves to have little or no risk of pregnancy were by no means completely protected against conception. For example, although women who cited infrequent or no sex as a reason for nonuse were less likely than other women to be sexually active, in 21 countries more than half of such women had had sex in the past three months. Moreover, in 43 countries, fewer than half of women who gave postpartum amenorrhea or breast-feeding as a reason for nonuse had had a birth within six months and had indicated elsewhere in the survey that they were amenorrheic, suggesting that many were once again fertile.

Limitations of the study, according to the authors, include insufficient data for Latin America, the Caribbean and parts of Asia, the exclusion of countries without a DHS study (such countries might have lower levels of unmet need than do the countries included in this analysis) and the focus on married women. Nonetheless, a comparison between

this study's findings and those from an analysis of DHS data from 1995–2005 indicates that barriers to access have become a less important reason for lack of contraceptive use, whereas infrequent sex (especially in Asia) and concern about side effects and health have become more important; these trends, the researchers say, suggest that although some nonusers may have a relatively low risk of unintended pregnancy, others might benefit from contraceptive services that counsel women about a range of contraceptive options. They conclude that “improvements in the quality of programs and services can go a long way toward addressing many of the concerns identified in this study,” and recommend that future research examine levels of and reasons for nonuse among unmarried women and across population subgroups.

–P. Doskoch

REFERENCE

I. Sedgh G and Hussain R, Reasons for contraceptive nonuse among women having unmet need for contraception in developing countries, *Studies in Family Planning*, 2014, 45(2):151–169.

In Malawi, HIV Prevalence Elevated Among Men Coerced into Having Sex

Men who are coerced into having sex by their long-term female partner have a dramatically increased likelihood of being or believing themselves to be HIV-positive, according to a study conducted in rural Malawi.¹ While the likelihood of HIV infection was also elevated among older men (odds ratio, 1.1 for each additional year of age) and among those who had had concurrent sexual partners in the prior four months (4.9), the strongest association in the study was with having been pressured into having sex (7.2).

Considerable research has documented the high prevalence of sexual violence against women throughout Sub-Saharan Africa and its link to HIV infection, but the few studies to date on sexual coercion among men have mostly focused on men in short-term relationships with older women. To address this issue, the investigators analyzed data from a longitudinal panel study on reproduction and AIDS conducted with a random selection of women and men residing near or in Balaka town in southern Malawi. The sample for the present analysis consisted of 684 men who were in-

terviewed every four months. In the study's third wave, in 2010, participants completed a module on interpersonal violence. Men were asked whether their partner had ever pressured them into having sex or beaten them, and whether they had had a concurrent sexual partner during the last four months. They also provided demographic information and answered questions about condom use with their main partner and alcohol consumption in the last month.

At wave 3, about eight in 10 men were married or living with their partner (79%), half had been with their current partner for more than four years (46%) and the vast majority had not had an additional partner during the last four months (96%). The men had an average age of 26, and virtually all were the same age as or older than their partner (98%). Most men used condoms inconsistently (90%), and thought that their partner was HIV-negative (95%) and faithful (90%); some 17% had had alcohol in the previous month.

Ten percent of respondents reported they had experienced unwanted sex with their wife or partner, 2% had suffered physical abuse and 3% had either tested positive for HIV or reported that they were infected. In a bivariate analysis, men who had been coerced into having sex were more likely than other men to be married (90% vs. 77%), be older than 24 (75% vs. 60%), have been physically abused (9% vs. 1%), have drunk alcohol in the past month (28% vs. 16%) and believe that their partner had HIV (10% vs. 5%).

In a logistic regression analysis that adjusted for social and demographic characteristics and source of serostatus information (HIV test or self-report), men whose partner had been sexually coercive were far more likely than those who had not experienced such behavior to be HIV-positive (odds ratio, 7.2). Moreover, respondents' odds of being HIV-positive increased by 10% with each additional year of age (1.1), and men who had had an additional partner during the past four months had almost five times the odds of HIV infection as did those who had remained monogamous (4.9).

Limitations of the study, according to the authors, include the cross-sectional nature of the data and the reliance, in some cases, on men's reports of their HIV status. Moreover, the data do not indicate whether sexual coercion preceded HIV infection, though the investigators assert that the timing of coerced sex and HIV infection is less important than

the “strength of the association” between the two characteristics; they note that if infection preceded coercion, rather than vice versa, the findings would underscore the need for interventions to reduce risky sexual behavior and improve communication among serodiscordant couples. Future work on this understudied topic should include qualitative as well as couples-based studies to give male respondents the opportunity to fully explain their experiences with unwanted sex, the authors conclude.—S. Ramashwar

REFERENCE

1. Conroy AA and Chilungo A, Male victims of sexual violence in rural Malawi: the overlooked association with HIV infection, *AIDS Care*, 2014, doi: 10.1080/09540121.2014.931562, accessed Aug. 13, 2014.

Disability Linked To Increased HIV Risk In Meta-Analysis

Disabled individuals in Sub-Saharan Africa may have an elevated risk of HIV infection, according to a recent meta-analysis.¹ When data from the 13 studies included in the analysis were pooled, the risk of HIV among persons with disabilities was elevated by about a third (relative risk, 1.3), and by about half when the analysis was restricted to men (1.5). However, the quality of studies was generally low, and associations were not consistently statistically significant for specific categories of disability.

Although one in seven people worldwide are disabled, such individuals are frequently overlooked by HIV programs. To examine whether disability is associated with HIV risk in Sub-Saharan Africa, Beaudrap and colleagues performed a systematic review and meta-analysis of studies measuring infection rates in disabled populations. In addition to searching a variety of databases for articles published between 2000 and 2013, the investigators looked for relevant data in Demographic and Health Surveys (DHS), AIDS Indicator Surveys and other sources; they also contacted experts and organizations that work on disability-related issues to identify other potential data sources, including unpublished work. Studies were eligible for inclusion in the analysis if they measured HIV prevalence or incidence among disabled adults in Sub-Saharan Africa; used a cross-sectional or cohort design; examined disability

by type, disorder, activity limitation or need for support; and had a response rate of at least 50%. In addition to assessing eligibility, two reviewers assessed study quality, which was based on such factors as sampling method, use of objective criteria for disability, inclusion of a control group and use of an appropriate method of HIV testing.

Because few of the studies that met the eligibility criteria included a nondisabled control group, the investigators used contemporaneous data on HIV prevalence in the relevant country or region as a basis for comparison. They calculated risk ratios for HIV infection both for all disabled individuals and for those with specific categories of disabilities.

Of the 13 studies included in the analysis, eight had been published in peer-reviewed journals, two were DHS or national HIV studies, and three were unpublished survey reports. Most focused on mental or intellectual disabilities (six studies) or hearing disabilities (three studies); the remaining four examined all types of disabilities and in some cases reported data by disability category. Studies were conducted in South Africa, Cameroon, Uganda, Mali and Kenya. Six of the studies included fewer than 300 disabled individuals; only one included more than 700.

HIV prevalence among disabled individuals ranged from 1% to 29% in individual studies and was highly correlated with the prevalence in the local population. For example, prevalence was low (1%) in Senegal, where HIV infection in the general population is relatively rare, and highest in Uganda (11–18%) and South Africa (9–29%), where the epidemic is widespread. Overall, the estimated risk ratio for disabled individuals was 1.3; the risk ratio was slightly smaller (1.2) and nonsignificant when the analysis was restricted to the eight studies published in peer-reviewed journals. Analyses by sex revealed an elevated risk among males (1.5), but the risk ratio among females (1.3) fell short of statistical significance.

In four of the eight studies with data on HIV prevalence among individuals with mental illness or cognitive impairment, these disabilities were associated with an elevated risk of infection (relative risks, 1.6–2.2). However, in two other studies, persons with mental or intellectual impairments had a reduced risk of HIV infection (0.3–0.4), and the pooled data for the full set of studies did not yield a statistically significant association for individuals with these conditions. The four stud-

ies with data on hearing impairment and the four with data on disabilities of any kind yielded similar results: Data from one study in each category suggested that HIV risk is elevated among relevant individuals, but the pooled data did not reveal an association. In all of these categories, heterogeneity among studies was substantial.

All of the studies had methodological limitations. Only two used random sampling; just three used and described a control group; and many did not report confidence intervals or other indicators of precision. Overall, only two achieved a score of eight or better on the researchers' nine-point quality scale. The meta-analysis itself also had limitations, the researchers note; these include the small number of eligible studies and the need to use data from DHS and other sources to create "control groups" for studies that lacked them.

Despite these issues, the authors conclude that, contrary to the assumptions of some stakeholders, "people with disabilities do not have a lower risk risk of HIV infection when compared to the general population." Because evidence from prior studies suggests that people with disabilities are less likely than others to obtain preventive services, testing and treatment for HIV, the authors recommend that HIV programs be "designed in collaboration with persons with disabilities," to ensure "effective inclusion of one of the world's largest minorities."—*P. Doskoch*

REFERENCE

I. De Beudrap P, Mac-Seing M and Pasquier E, Disability and HIV: a systematic review and a meta-analysis of the risk of HIV infection among adults with disabilities in Sub-Saharan Africa, *AIDS Care*, 2014, doi: 10.1080/09540121.2014.936820, accessed July 30, 2014.

The Need for Contraception To Delay First Pregnancy In India Is High

Among young married women in India, the demand for contraception to delay first pregnancy is high but largely unmet.¹ According to a study conducted in six states, 51% of women aged 15–24 who had been married for five or fewer years had delayed or wanted to delay their first pregnancy; of those, only 10% had used a modern or traditional form of contraception. Contraception was more likely to be practiced by women with eight or more years

of education than by women with no education (odds ratios, 2.0–3.2), and less likely to be practiced by women who felt pressure to become pregnant soon after marriage than by those who did not feel such pressure (0.6).

Cultural norms in India discourage contraceptive use early in marriage; as a result, little is known about the demand for contraception during this period, including the extent to which the demand is satisfied and the characteristics associated with having the demand. To fill this gap in the literature, researchers analyzed data from a survey conducted in 2006–2008 among women in Andhra Pradesh, Maharashtra and Tamil Nadu, all of which are located in the country's relatively developed southern and western region, and in Bihar, Jharkhand and Rajasthan, which are situated in the less-developed northern and eastern region. The states were chosen to represent the country's social, economic and demographic diversity. Women who had been married for more than five years, were not cohabiting with their husband at the time of the interview or had not answered the survey question about whether they wanted to delay their first pregnancy were excluded from the final sample.

Participants were asked if they had wanted a baby as soon as possible after marriage. Those responding "no" were considered to have had a demand for contraception. The respondents were then asked if they had used any modern or traditional contraceptive method to delay their first pregnancy; if they had, they were considered to have had a satisfied demand for contraception. The remainder of the survey included questions on women's social and demographic characteristics; premarital knowledge of contraception; relationship characteristics and early marital experiences; and perceived access to health care. The researchers conducted multivariate logistic regression analyses, both for the sample as a whole and by region, to identify characteristics associated with contraceptive use among women with a demand for contraception to delay first pregnancy.

Overall, 51% of the 9,572 women in the sample had had a demand for contraception to delay first pregnancy; this proportion was higher in the northern and eastern region than in the southern and western region (62% vs. 44%). Among these women, 10% had used contraceptives; the proportion was similar in both regions. In general, condoms were the most common contraceptive used

by those with a demand for contraception (65%), followed by oral contraceptives (27%) and traditional methods (16%); however, a higher proportion in the southern and western region than in the northern and eastern region reported use of the pill (39% vs. 14%), while the reverse was true for the use of traditional methods (10% vs. 23%).

For almost all of the variables examined, women with a demand for contraceptives differed from their counterparts who had wanted a pregnancy as soon as possible. Compared with other women, those with a demand for contraceptives were better educated, and they were more likely to have been aware of and known how to get contraceptives before marriage (23% vs. 16%), to report first marital sex as forced (28% vs. 22%), to have decision-making power in everyday matters (29% vs. 23%), and to be comfortable approaching a health care professional for contraceptives (56% vs. 51%). Also, compared with other women, those with demand were less likely to have been 18 or older at cohabitation (48% vs. 54%), to have worked before marriage (29% vs. 35%), to be an urban resident (24% vs. 26%), to have been involved in choosing their husband and to have known their husband before marriage (29% vs. 37%), and to have felt pressure to become pregnant quickly (26% vs. 37%).

Regional differences in the profiles of young women with a demand for contraception followed expected patterns. Compared with their counterparts in the less-developed northern and eastern region, young women in the southern and western region were more likely to have been 18 or older at cohabitation (61% vs. 35%), to be better educated, to have worked before marriage (35% vs. 23%), to have received quality sex education (16% vs. 1%), to have a husband five or more years older (66% vs. 50%), to have been involved in choosing their husband and to have known their husband before marriage (48% vs. 11%), to report having decision-making power in everyday matters (32% vs. 25%) and to report self-efficacy in expressing their opinions to elders or in confronting others (23% vs. 13%). Also, women in the southern and western region had a higher mean household wealth.

In multivariate logistic regression analyses among the 4,933 women with a demand for contraception to delay first pregnancy, a variety of characteristics were associated with contraceptive use, sometimes with regional

variations. Overall and across regions, better education was positively associated with contraceptive use to delay first pregnancy (odds ratios, 2.0–5.3), as were household wealth (1.03–1.05 per additional scale unit), premarital awareness of contraceptives and where to obtain them (1.4–1.9) and having received quality sex education (1.5–2.5); having felt pressure to get pregnant soon after marriage was negatively associated with satisfied demand (0.5–0.7). Involvement in choosing a husband was associated with contraceptive use overall (1.8) and in the southern and western region (2.0), but not in the northern and eastern region. Similarly, having discussed marital issues (how to spend money, problems with in-laws and when to have a baby) early in marriage was associated with satisfied demand overall and in the southern and western region (1.3 and 1.4, respectively), but not in the northern and eastern region. Women's decision-making authority was associated with contraceptive use to delay first pregnancy overall (1.7) and in the northern and eastern region (2.3), but not in the southern and western region. Comfort approaching health care workers was associated with increased odds of satisfied demand in the southern and western region (1.4); forced first marital sex was negatively associated with contraceptive use in the northern and eastern region (0.7).

The researchers note several study limitations: They could not assess duration or consistency of contraceptive use; the data were cross-sectional; the agency and access to health care variables reflected the respondents' current situation, rather than their situation shortly before or after marriage; the agency variable may not have reflected the various ways women may be able to exercise choice; and the health care access variable was hypothetical and not based on the respondents' actual experiences. Despite these limitations, the researchers conclude that their study "provides compelling evidence countering the popular notion that young couples in India do not wish to delay childbearing and underscores the limited exercise of reproductive rights displayed by many recently married young women."
—L. Melhado

REFERENCE

1. Jejeebhoy SJ, Santhya KG and Francis Xavier AJ, Demand for contraception to delay first pregnancy among young married women in India, *Studies in Family Planning*, 2014, 45(2):183–201.

Continuation and Pregnancy Rates Are Similar For Continuous, Cyclic Pill

Women are similarly likely to continue taking oral contraceptives and to avoid pregnancy whether they use a continuous regimen or a cyclic regimen of pills, finds a randomized trial conducted in the Dominican Republic.¹ A year after starting their assigned pills, about three-fourths of women were still taking them and one in six had become pregnant, outcomes that did not differ between groups. Women's risk of stopping was elevated if they desired reduced menstruation (hazard ratio, 1.4) and reduced if they had experienced a previous birth (0.5). Bleeding was not significantly associated with the likelihood of stopping.

Although continuous oral contraceptive regimens, which result in less bleeding than do cyclic regimens, have proven effective and acceptable to most women in studies in developed countries, few data are available for developing countries. Investigators conducted the new trial in a reproductive health clinic in Santo Domingo between 2008 and 2010. Women aged 18–30 who requested oral contraceptive pills, whether they were new to contraceptives or switching from a nonhormonal method, were eligible for the study if they had periods lasting 21–35 days, had not breast-fed in the past two months, and were not pregnant or planning to become pregnant in the next 12 months. The women were randomly assigned to take a combined oral contraceptive (norgestrel and ethinyl estradiol), provided for free, according to either a 28-day cyclic regimen or a continuous regimen that did not include any placebos; those in the latter group were allowed flexible breaks (stopping pills for three days) to manage breakthrough bleeding if they experienced persistent bleeding or spotting. At enrollment, women provided information on their demographic characteristics, menstrual patterns and contraceptive use; they provided information on various outcomes (e.g., side effects, discontinuation) at quarterly follow-up visits, and had urine pregnancy tests at months six and 12. The investigators compared characteristics and outcomes between the two groups using bivariate analyses, and assessed independent correlates of the risks of pill discontinuation and pregnancy with multivariate analyses.

On average, the 358 women studied were 23 years old and had two children. Two-thirds were cohabiting with a nonmarital partner. Most had 12 or fewer years of education (88%) and were of mixed race (97%). Although 48% had previously used oral contraceptives, more than two-thirds of this group had used them for a year or less. Nearly all agreed at enrollment that “having a regular menstrual period is a sign of health” (93% in each pill group) and “menstruation is part of what makes me a woman” (90–93%). Only a minority agreed that “stopping menstrual periods is a good idea” (25–29%), but the majority indicated that they “would be interested in not having a period every month” (53–57%) and that they “would be happy to use a birth control method that made my period stop for a certain amount of time” (51–56%).

Analyses showed that women’s probability of still taking their pills at 12 months was 78% in the continuous regimen group and 72% in the cyclic regimen group, a nonsignificant difference. The main reasons women cited for discontinuation were that they had run out of pills or forgotten to take them (cited by 45%) or had experienced side effects other than bleeding (20%). In multivariate analyses, women had a reduced risk of stopping if they had experienced a previous birth (hazard ratio, 0.5), and an elevated risk if they had a desire for reduced menstruation (1.4). Regimen type was not associated with discontinuation. Across all quarterly visits, one-fourth of women in each group reported having missed three or more pills in the past month.

Among all women randomized, the rate of pregnancy at 12 months was 16% in the continuous regimen group and 17% in the cyclic regimen group; again, this difference was nonsignificant. The findings were the same after exclusion of women who had never used their pills, had conceived before randomization or had violated the study eligibility criteria. In

multivariate analyses, neither type of regimen nor any of the other characteristics studied significantly predicted pregnancy risk.

Larger proportions of women in the cyclic regimen group than in the continuous regimen group reported any bleeding, regular bleeding or a normal volume of bleeding. Although women using the cyclic regimen were more likely than those using the continuous regimen to perceive their bleeding patterns as acceptable at three months (99% vs. 93%) and at six months (98% vs. 89%), the groups were statistically indistinguishable on this outcome thereafter.

A smaller proportion of women in the continuous regimen group than in the cyclic group reported backache at six months (39% vs. 52%) and breast tenderness at 12 months (29% vs. 42%). The groups did not differ with respect to hemoglobin and hematocrit levels. Two serious adverse events were reported in continuous regimen users and four were reported in cyclic regimen users.

The study’s findings suggest that the continuous and cyclic regimens have similar efficacy, safety and acceptability, although contrary to the investigators’ expectations the former was not associated with better continuation over time. Counseling women about the safety and health benefits of continuous regimens—especially in settings wherein menstruation is viewed as a sign of health and fertility—is important to ensure adherence, they note. “Presenting women with the choice of continuous use as an alternative to cyclic use enables women to select a regimen that works best for their own lifestyle,” the investigators conclude.—*S. London*

REFERENCE

1. Nanda K et al., Continuous compared with cyclic use of oral contraceptive pills in the Dominican Republic: a randomized controlled trial, *Obstetrics & Gynecology*, 2014, 123(5):1012–1022.