

REPORTS

The Introduction and Use of Norplant® Implants in Indonesia

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In this study, patterns of Norplant® use in Indonesia are reviewed to assess the implications of this experience for the introduction of new contraceptive methods. Data from the Norplant Use-Dynamics Study and the 1994 Indonesia Demographic and Health Survey are analyzed, and patterns of acceptance, continuation, and removal are described. Acceptance of Norplant has increased steadily since it was first introduced. The method is now used by more than 5 percent of all married women of reproductive age. Continuation rates among Norplant users are higher than among users of the IUD. One factor behind high continuation rates may be that a substantial proportion of acceptors were not told that removal before five years was possible. Results indicate that deficits occurred in the quality of service delivery and that a need exists for improved provider training, better supervision, and clearer and better-enforced guidelines regarding women's right to have Norplant removed on demand. (STUDIES IN FAMILY PLANNING 1998; 29, 3: 291–299)

The introduction of certain modern contraceptive methods by government-supported family planning programs in developing countries has become a matter of considerable controversy. In India, for example, both the Norplant® contraceptive implant and the injectable contraceptive Depo-Provera have been slow to become available, despite their approval by regulatory authorities in many other countries, because of the concerns of women's groups about their safety. In Vietnam, the Ministry of Health's use of quinacrine for nonsurgical female sterilization was halted in the face of criticism from international agencies that the procedure had not been adequately evaluated (Pies et al., 1994).

Disagreements about the importance of new contraceptives and about the ways they are introduced and used by family planning programs reflect the complexities of reproductive health services in developing countries and changing perspectives on government-supported family planning activities. Over the past several years, increasing attention has been given to the quality of contraceptive services, and more emphasis has been put on comprehensive reproductive health services and on contraceptive use to achieve individual reproductive goals (Faúndes and Hardy, 1995). The assumption that the introduction of a new contraceptive method automatically increases client choice may be giving way to a perspective based on an analysis of how and to whom a new method is offered.

Analysis of the potential positive and negative effects of introducing new contraceptive methods is a complex process without agreed-upon guidelines for deciding which competing interests should be given greatest weight. In the context of target-oriented family planning programs, a serious concern arises that women will be persuaded to accept new methods without receiving adequate information about the likely side effects or the opportunity to switch methods when they are dissatisfied or when their needs change. Adding new methods to service-delivery systems that are op-

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erating with limited resources may lead to services of poor quality, particularly when the methods require provider assistance for proper use (see Simmons et al., 1997).

Nevertheless, serious consideration must be given to the morbidity and mortality associated with high fertility and undesired childbearing and to the potential decline in unmet need for contraception resulting from increased contraceptive availability and a wider range of methods. Is the new method likely to be acceptable to women with high reproductive risk and/or an unmet need for contraception? How different is the new method from currently available options? Is the new method likely to be considered less invasive or more culturally appropriate than current alternatives? Even in the context of target-driven programs where a new method may not be offered to all potential users, does it expand contraceptive choice for at least some women? If adding a new contraceptive to the method mix will help reduce the number of unsafe abortions, high-risk pregnancies, and unwanted children, how does this balance against existing deficits in service quality? Are providers who give only partial information to potential users likely to endanger the health of their clients?

The introduction of Norplant in developing countries has been a focal point for much of the recent debate about contraceptive introduction. Norplant has been of particular concern because it is a long-term, provider-dependent method that women cannot remove on their own (Spicehandler and Simmons, 1994).¹

Sources of Data

Few discussions of the introduction of new contraceptive methods are based on the experience of a large number of women. Instead, much of what appears in the literature are reports concerning a small number of women or service-delivery points selected in ways that often make it difficult, and frequently make it impossible, to tell the extent to which the attitudes and behavior studied are typical of the universe of current or potential future users.

This report, which is based on data from two large-scale sample surveys, attempts to answer basic questions regarding patterns of Norplant use in Indonesia and to assess, to the extent that the data permit, the nature and prevalence of problems associated with the introduction of this method.

Indonesia is probably the most important case study possible. The government of Indonesia has actively promoted the use of Norplant contraceptive implants for the past decade, and more women now use Norplant in Indonesia than in any other country. Indonesia is also

important because its family planning program is a model for programs elsewhere. One recent newspaper account notes that "86 countries studied Indonesia's family planning effort" (Dow Jones, 1996). Finally, Indonesia is an important case study because of the country's record of both increasing food production and lowering population growth. According to Hull and Hull (1995: 4), officials at many international organizations believe that Indonesia's leaders took on "the challenges of Malthusianism, and won."

Two recent studies provide data on Norplant use in Indonesia. The first is the Norplant Use-Dynamics Study, which was carried out by the National Family Planning Coordinating Board (widely known by its Indonesian acronym, BKKBN) in conjunction with the Population Council's Asia and Near East Operations Research and Technical Assistance Project, supported by the United States Agency for International Development (USAID) (BKKBN, 1993). Between February and August 1992, 3,107 past and current Norplant users in West Java and West Sumatra were interviewed, along with 436 family planning providers and field-workers. This report deals only with the study's data from the Norplant users. West Sumatra was selected because it has the highest rate of implant acceptance per capita of any province in Indonesia. West Java, on the other hand, "has a middling acceptor-to-population ratio which, like Indonesia as a whole, has steadily increased since the inception of the national program" (Kasidi and Miller, 1993: 4). At the time the sample was drawn, 19 percent of all Indonesian Norplant users were from West Java and 4 percent were from West Sumatra.

A multistage sampling design was used in which *kabupatens* (counties) were first selected within the two provinces, followed by a sampling of clinics and individual implant users. In West Sumatra, *kabupatens* were selected purposively to include relatively few areas that were difficult to reach (BKKBN, 1993). In West Java, *kabupatens* were stratified by region and randomly selected with probability proportional to population size. The northern region was removed from the sampling frame because it was to be covered in a similar study. Tangerang *kabupaten* was removed because of its proximity to Jakarta. From the sampled *kabupatens*, clinics were selected with a probability proportional to the number of Norplant acceptors, and Norplant users were systematically sampled thereafter.

A second important source of data on Norplant use is the 1994 Indonesia Demographic and Health Survey carried out by the Central Bureau of Statistics (CBS), the State Ministry of Population, BKKBN, the Ministry of Health, and Macro International. In the first stage of sampling, census enumeration areas were selected with

probability proportional to size (PPS). Households were then divided into clusters and one cluster was selected from each area with PPS. Finally, 25 households were selected from each cluster using systematic sampling (CBS et al., 1995). A nationally representative sample of 28,168 ever-married women of reproductive age, including 1,775 Norplant users, was surveyed from all of Indonesia's 27 provinces.

This report is based on published results of the two surveys and tabulations carried out by the authors or, in the case of the Indonesia Demographic and Health Survey, by the staff of Macro International.

Trends in Acceptance and User Characteristics

The first study of the Norplant implant in Indonesia began in May 1981 and involved 813 women at Jakarta's Raden Saleh Clinic and at Haskin Sadikin Hospital in Bandung.² This initial research was sponsored by BKKBN, the Ministry of Health, and the Indonesian Institute of Science.

Less than 18 months later, "as a result of the very encouraging reports" (Sutedi et al., no date: 3), the study was expanded to 11 teaching hospitals and 10,000 users. By late 1983, research on Norplant was expanded again to selected subcenters of the 11 teaching hospitals. These subcenters included district hospitals, regency hospitals, and health centers. Norplant was formally registered with the Indonesian Ministry of Health in January 1986.

Since its approval, use of Norplant has expanded rapidly in Indonesia, marked by periods of sharp increase in the late 1980s and again in 1994–95. The cumulative number of insertions is estimated to have ex-

ceeded three and one-half million (see Table 1). According to the DHS, Norplant is more widely used in Indonesia than are sterilization, condoms, or traditional methods. Whereas the overall contraceptive prevalence among currently married women increased by 10 percent between 1991 and 1994, the number of married women using Norplant grew by 58 percent. During that period, IUD use declined by 23 percent, possibly reflecting a displacement by Norplant users. In 1987, only 0.4 percent of all currently married women on the islands of Java and Bali used Norplant. By 1994, nearly 5 percent of all married women of reproductive age were using the method. Norplant use varies widely by province, however, ranging from 0.6 percent in Bali to 10.2 percent in Bengkulu (CBS et al., 1995).

Characteristics of current Norplant users obtained from the Indonesia DHS are presented in Table 2. Most Norplant users are rural women with at least some primary education and two or more living children. Just over half of all Norplant users are aged 25–34, 20 percent are aged 20–24, and 17 percent are aged 35–39. Norplant users more often tend to be rural, less well educated, and younger than users of other methods.

Public health centers (*puskesmas*), private midwives, and health posts (*posyandu*) are the main sources of Norplant services. In general, Norplant users are more

Table 1 Norplant insertions, by year, Indonesia, 1985–1997

Year	Number of insertions
1985–86	37,584
1986–87	44,703
1987–88	145,826
1988–89	207,943
1989–90	398,059
1990–91	382,643
1991–92	283,965
1992–93	294,309
1993–94	341,755
1994–95	467,194
1995–96	559,993
1996–97	477,369
Total	3,641,343

Source: Fisher et al., 1997: Table 1; BKKBN staff, personal communication, 1998. Annual figures are calculated for the period 1 April–31 March.

Table 2 Selected characteristics of contraceptive users, by method, Indonesia, 1994

Characteristic	Norplant	IUD	Female sterilization	Pill	Injectable	All modern methods
Residence						
Urban	17	34	53	27	32	31
Rural	83	66	47	73	68	69
Education						
No education	16	11	7	13	8	11
Some primary	38	26	31	34	28	31
Completed primary	34	28	25	32	34	31
Some secondary	13	35	36	21	30	27
Number of living children						
None	<1	0	0	3	1	1
1	24	17	2	24	28	22
2	28	35	9	29	28	28
3+	48	48	90	44	43	48
Age						
15–19	3	1	0	4	5	3
20–24	20	9	0	16	23	16
25–29	24	18	6	23	29	22
30–34	27	22	16	23	23	23
35–39	17	21	33	19	13	17
40–44	6	18	26	11	7	12
45–49	2	11	20	4	2	6
(N)	(1,283)	(2,697)	(812)	(4,478)	(3,980)	(13,643)
Percent of users	4.9	10.3	3.1	17.1	15.0	52.1

Source: CBS et al., 1995: calculated from Table 5.2.1, p.74. Total includes other methods not shown in table.

likely to rely on public providers than are users of other modern methods.

Targeted Services

Indonesian officials promoted Norplant services to mothers aged 20–25 as a birth-spacing method, to mothers above the age of 30 to limit future births (YKB, 1989), and to women living in rural areas. The targeting was a manifestation of what the Minister of Population, Haryono Suyono, has called the “guided democracy” approach to contraceptive choice. “Guided democracy” means that although several contraceptive methods may be available, women are encouraged to use a particular one. The justification for this approach is that service providers know more about the different contraceptive methods than do potential acceptors, and the provider has a duty to guide potential acceptors toward the method that is most appropriate for them (Haryono Suyono, 1992).³

The available data do not permit a full assessment of the guided democracy approach to Norplant provision. In particular, data are not available for the extent to which service providers promoted Norplant in preference to other methods, especially the IUD. Norplant users are more heavily concentrated among women in rural areas than are users of any other method with the exception of male sterilization, which accounts for less than 1 percent of all contraceptive use. Use of IUDs, oral contraceptives, and injectables is also greater among rural women, but the differences between urban and rural prevalence, although substantial, are smaller than that among Norplant users. Whereas nearly one-third of all users of modern methods are urban residents, only 17 percent of Norplant users reside in urban areas, as shown in the table.

One element in BKKBN’s program to promote Norplant services to women in rural areas was the use of mass campaigns, often called safaris.⁴ According to the 1992 use-dynamics study, 73 percent of women who had ever used Norplant in West Java and 54 percent of ever users in West Sumatra had the implant inserted during a safari.⁵ Safaris are organized locally by the armed forces, the police, political authorities, professional organizations, women’s groups, and other nongovernmental or semigovernmental organizations. During safaris, services are provided to a large number of individuals at one time. These mass programs are built around Indonesians’ confidence in and acceptance of activities performed in connection with peer groups (Bratakoesoema

et al., 1993). But critics claim that safaris minimize the opportunity for individual counseling and create an environment in which social pressure is possible, perhaps even likely.

Do Women Receive Adequate Information?

Critics assert that the environment created by Indonesia’s official fertility-reduction policy and the mass campaigns is one in which women are not given the information they need to make an informed choice about Norplant use. To study this issue, three aspects of users’ knowledge are examined here: knowledge of Norplant’s five-year effectiveness; knowledge of the possibility of early removal; and knowledge of common side effects.⁶

The large majority of Norplant users surveyed during the use-dynamics study were aware of the method’s five-year effectiveness (89 percent in West Sumatra and 93 percent in West Java), and more than 90 percent of users in both areas knew that Norplant should be removed at the end of five years (not shown). Only one-third of users in West Java and 59 percent of users in West Sumatra knew that Norplant could be removed before five years, however (BKKBN, 1993). In both West Java and West Sumatra, women who had had Norplant inserted during a safari were more likely to be aware of the method’s five-year effectiveness and the possibility of early removal than were women who had received Norplant from other sources (BKKBN, 1993).

Norplant users were apparently not adequately informed about possible side effects. Fewer than one-third of respondents in either West Java or West Sumatra could name any common side effect of Norplant. Fewer than one-fourth of respondents, for example, knew that Norplant could cause prolonged bleeding. The women themselves recognize their lack of knowledge. Among respondents who were dissatisfied with the information they received from providers, the most common complaints were a lack of information on removal services, on side effects, and on how to manage Norplant-related problems when they occurred. Although some women may have forgotten what they were told about Norplant’s characteristics and side effects, other studies have also found that acceptors are not properly informed about the contraceptive methods they are using. A situation-analysis study completed by Tuladhar and his colleagues in nine provinces in Indonesia found evidence of a lack of information among acceptors of several long-term methods (BKKBN, 1994).

Continuation Rates

To evaluate users' experience with the Norplant implant, continuation rates were calculated from both sources of data. These rates are presented in Table 3 for the Indonesia DHS and the use-dynamics study. According to the DHS, among women who had had the Norplant inserted between 1989 and 1994, the cumulative continuation rate at 48 months after insertion was 84 percent. The primary reason for discontinuation during the first four years was side effects (ranging from 3.5 percent of all users at 12 months to 11.9 percent at 48 months) (not shown). The net rate of discontinuation because of method failure was 0.5 percent at 48 months of use.

According to the use-dynamics study, the cumulative continuation rate at four years was 81 percent in West Java and 83 percent in West Sumatra; at five years (60 months), it was 33 percent in West Java and 55 percent in West Sumatra, indicating that most women returned for removal at or just before five years of use. By 66 months, only 16 users in West Java and four in West Sumatra had not returned for removal (not shown). Net termination because of pregnancy was less than 1 percent in both provinces during the first four years of use, but accounted for 2 percent of discontinuations in West Sumatra after five years of use.

Continuation rates among Norplant users were much higher than among users of other long-term methods. According to the Indonesia DHS, the discontinuation rate at 12 months among IUD users was nearly four times higher than that among Norplant users (see Table 4).⁷ The differences were even greater between Norplant users and users of the pill and injectables. Some analysts have speculated that one reason for the high Norplant continuation rates is that too few providers are available who are able to perform removals, but this supposition is not borne out by the low rates of continued use after five years. Some providers are reported to be reluctant to remove the implant before five full years of use, but as is discussed below, this explanation seems

Table 3 Norplant cumulative life-table continuation rates, by data source, Indonesia

Source	12 months	24 months	36 months	48 months	60 months
1994 DHS					
All users (1989–94)	95.7	91.4	86.7	83.5	na
1992 use-dynamics study					
West Java	96.5	93.2	88.4	80.8	33.0
West Sumatra	95.8	91.2	86.8	82.6	55.0

na= Not available.

Source: Special tabulations by the Demographic and Health Surveys/Macro International; CBS et al. (1995: Table 7.1, p. 87).

Table 4 Twelve-month cumulative life-table discontinuation rates, by reason for discontinuation, according to last method used, Indonesia

Method	Method failure	To become pregnant	Health/side effects	All other reasons	All reasons
Norplant	0.3	0.1	1.8	2.2	4.4
IUD	1.8	0.9	8.4	4.1	15.2
Pill	4.1	10.7	10.9	8.1	33.8
Injectables	1.6	4.5	15.0	8.0	29.1

Source: CBS et al. (1995: Table 7.1, p. 111).

unlikely to account for the differences in continuation among users of different methods.

One factor contributing to high continuation rates among Norplant users is that many women did not know that removal before five years was possible. Table 5 presents data on continuation rates by whether women knew that the implant could be removed. Among Norplant users in West Java who knew that the implant could be removed before five years, the continuation rate was 94 percent at 12 months, 79 percent at 36 months, and 30 percent at 60 months (BKKBN, 1993). This contrasts with the much higher third- and fourth-year continuation rates (94 and 90 percent) among women who said they were unaware of the possibility of early removal. At 60 months, continuation rates are the same for both groups. In West Sumatra, continuation rates through the first year are similar for both groups of users, and differences in continuation rates at 36 months are smaller than they are in West Java: 83 percent of women who were aware of the possibility of early removal used the method for at least three years, compared with 93 percent of those who were not aware of early removal. At 60 months, continuation rates are relatively high for both groups: 51 percent and 62 percent, respectively. These comparisons suggest that third-year continuation rates would be 10–20 percent lower if all Norplant users were aware of the possibility of early removal. Continuation rates at the fourth and fifth years would be lower still. This relationship is consistently strong regardless of users' characteristics.

Although women who had their implants removed may be more likely than other women to recall being told that the implant could be removed, the data on continuation rates underscore the consequences of the users' not having adequate information regarding Norplant. Some women who would have had Norplant removed early did not do so because they were unaware of the option of early removal. Continuation rates remained high among women who had been properly informed about the possibility of early removal, however,

Table 5 Cumulative life-table continuation rates, by knowledge of removal and selected characteristics, Indonesia

Province/ knowledge of removal ^a	12 months	24 months	36 months	48 months	60 months
West Java					
Yes	94.0	88.4	78.7	64.3	30.4
No	97.7	95.7	93.7	90.1	32.4
West Sumatra					
Yes	95.0	88.7	82.6	77.1	50.6
No	96.9	94.8	93.1	90.9	62.0
West Java					
15–29 years					
Yes	94.3	86.4	74.3	61.7	33.4
No	97.7	95.6	94.0	91.7	28.8
30–49 years					
Yes	93.0	91.2	84.9	68.7	30.5
No	98.4	96.7	95.6	92.5	29.4
West Sumatra					
15–29 years					
Yes	94.0	88.1	79.4	73.6	31.3
No	95.7	95.7	94.5	89.2	26.2
30–49 years					
Yes	94.8	88.3	82.5	78.0	41.5
No	97.9	95.6	93.4	93.0	47.9
West Java					
Education less than primary					
Yes	92.5	89.7	82.4	65.5	32.4
No	97.5	96.1	94.5	90.9	32.0
Education primary or higher					
Yes	94.8	87.5	76.3	64.7	31.3
No	98.9	96.9	96.1	92.0	45.0
West Sumatra					
Education less than primary					
Yes	93.6	88.0	81.0	77.0	42.5
No	96.2	95.0	92.5	91.9	43.7
Education primary or higher					
Yes	95.4	88.5	82.3	76.9	36.3
No	98.4	96.3	94.9	92.1	46.8
West Java					
Two or fewer living children					
Yes	96.0	89.3	76.1	65.4	25.9
No	97.5	96.5	95.7	93.7	27.8
Three or more living children					
Yes	91.1	87.7	82.3	65.0	35.4
No	98.5	96.1	94.3	88.8	30.0
West Sumatra					
Two or fewer living children					
Yes	94.6	88.1	83.2	75.4	36.6
No	96.3	96.3	94.1	91.1	na
Three or more living children					
Yes	94.5	88.3	81.2	77.4	40.4
No	97.7	95.4	93.5	92.1	51.0

na = Not available.

Notes: Differences in the survival experiences of women who knew about removal before five years, and those who did not know about removal before five years are highly significant at the 1 percent level. The statistic used is Wilcoxon. Rates provided for 60 months are unstable because the number of cases is fewer than 100, and the standard errors are greater than 5 percent. Therefore, these rates should be interpreted carefully.

^aKnowledge of removal means that the user knew that Norplant could be removed before five years of use.

demonstrating that many women are satisfied with the method. Earlier clinical studies, where counseling, information, and removal services were readily available,

were also characterized by high continuation rates. Research conducted during a 1984 field study reported a cumulative continuation rate of 95 percent one year after insertion (YKB, 1989). A five-year preintroduction study, initiated in 1981, reported continuation rates of 96 percent at 12 months of use, 88 percent at 36 months, and 78 percent at 60 months (Affandi, 1987).⁸

Removal Services

Another criticism of the delivery of Norplant services in Indonesia is that removal services are not available (Ward et al., 1990). To judge whether removal services were adequate, patterns of removal and the extent to which women were denied removal services were examined. Before having the implant removed, more than half of those who discontinued use had consulted either a friend, neighbor, another Norplant user, or a family planning worker. The majority of women requesting removals had them performed a short time later. The median time between the first request for removal and the removal itself was less than one week. Among women who discontinued Norplant before the fifth year, 60 percent in West Java and 56 percent in West Sumatra obtained a removal within one week of their first request. An additional 21 percent in West Java and 25 percent in West Sumatra had the removal performed within a month of their initial request. Fewer than 15 percent of users in either province had to wait longer than one month for the removal to be performed (BKKBN, 1993).

In West Java, nearly 70 percent of the 193 women who had discontinued Norplant before five full years of use had their removal performed after only one request, whereas 27 percent had to request removal two to three times before it was performed. Removal services were more difficult to obtain in West Sumatra. Half of the women obtaining early removals had to make more than one request for removal, and 14 percent had to make four or more requests before the procedure was completed.

Five percent of current users in West Java and eight percent in West Sumatra had requested removal at various times. Of these 154 women, 64 percent were persuaded to continue with Norplant (58 women), or were given medicine to alleviate side effects (41 users). An additional 14 women (11 in West Java and three in West Sumatra) reported that removal services were unavailable, and 18 women said they were refused removal because their reasons for wanting to discontinue Norplant were deemed “not relevant” by their providers. Women who were denied removal services represent 1 percent of all present and past users.

The results indicate that although the situation is considerably better than the program's most severe critics claim, improved provider training is needed, as are better supervision and clearer and more strongly enforced guidelines regarding the right of women to have Norplant removed on demand.

A recent report by Fisher and his colleagues (1997) reviews the availability of removal services in more detail than is done here. That report and this analysis indicate that program managers should plan for removals from the time insertions are first available in order to be ready to provide removal on demand. The experience in Indonesia also suggests that providers should be prepared to offer information and services for back-up contraception for those overdue for removal.

Context

The introduction of Norplant in Indonesia was shaped by history, culture, economics, and the personalities of the people involved. The implant was promoted because Indonesian family planning policymakers decided that the method was safe and that encouraging its use could help meet the socially and politically valued goals of raising contraceptive prevalence. The way the implant was incorporated into Indonesia's family planning program reflected the prominence given to the country's population goals and the lower priority given to matching contraceptive technology with women's perceived reproductive health needs.

By the time Norplant was being tested in Jakarta in 1981, Indonesia's family planning program was already being heralded as a success, which, according to the standards of the times, meant that it had provided a large number of women with contraceptive services, and seemed to have contributed to a decline in fertility, at least in Java and Bali (Hull et al., 1997). The program's success was rooted in an approach that emphasized mass campaigns for public education, the use of government personnel and allied organizations to advocate contraceptive acceptance, and group distribution activities (Sullivan et al., 1976).

The orientation of the family planning program, and of Norplant services in particular, is one manifestation of a cluster of attitudes and behaviors that elevated urban government (and frequently military) bureaucrats above the rural population when implementing development projects. Women were encouraged to accept contraception for the good of their families, communities, and country (McNicoll and Singarimbun, 1983; McNicoll, 1995), and not necessarily to meet their own reproductive health goals. (Clearly, these orientations

are not mutually exclusive. Women can practice contraception for both individual and social reasons.)

The cost of Norplant also played a role in the way it was delivered. Because Norplant was not approved by the United States Food and Drug Administration when it was introduced in Indonesia, it could not be supplied by the United States Agency for International Development (USAID), the largest donor of contraceptives to Indonesia, or by USAID-supported groups. Other donors provided only a share of the resources needed to purchase and deliver Norplant. Some providers apparently used a monetary argument to justify their efforts to encourage women to continue to use the method, even after they had requested removal. Providers might have been more willing to remove a less costly method because doing so would not be perceived as such a waste of resources (Hull, 1996). Moreover, if the Indonesian family planning program had had more resources, it might have used those resources to improve the quality of services.

Indonesia does not have institutions that define their mission as in some way related to the monitoring or improvement of contraceptive services, thus providing a counterweight to Norplant enthusiasts. No influential consumer groups provide information to consumers to balance the views of product advocates. Likewise, the Indonesian legal system does not serve as a mechanism to protect consumers through suits against manufacturers or suppliers. Consumer advocates and the courts in Indonesia did not play the watchdog role that they play in some other countries. Some women's organizations expressed concern about Norplant and the way it was being promoted by the national family planning program, but these groups were too weak to influence the implementation of the family planning program to a significant degree.

Another source of correction might have come from the staff of international population and family planning organizations working in Indonesia, such as USAID, the United Nations Population Fund, or the Population Council, which developed Norplant. For the most part, Population Council staff functioned as "product champions" (Reed, 1983: 347). They and other international specialists underestimated the extent to which problems existed with respect to counseling and removals. These outsiders were limited, as were the program's leaders themselves, by a lack of data on the extent and seriousness of these problems. At times, rumors of significant problems circulated in Jakarta. Careful efforts to investigate these complaints, however, found that the circumstances were typically more complex and the problems were frequently less serious than in the rumored versions (Hull, 1991).

Conclusion

The Norplant implant was introduced in Indonesia more carefully than any other contraceptive method. Norplant implants have provided women with a convenient and highly effective, long-term contraceptive method. Hundreds of thousands of women have been satisfied with the service they received. To judge from its prevalence and the continuation rates among those who knew that early removal was possible, Norplant may be more acceptable than either the IUD or sterilization. Nevertheless, analysis indicates important shortcomings in service quality, especially with regard to the limited information providers have offered to prospective users. The small proportion of acceptors who recalled that the implant could be removed before five years is particularly troublesome.

The future introduction of the Norplant contraceptive implant and other new methods should be guided by more research, undertaken on more issues, by more people, and from more perspectives than was the case in Indonesia. For a discussion of a possible research agenda, see Simmons et al. (1997); Spicehandler and Simmons (1994); and Cleland et al. (1990). Moreover, more policymakers must be persuaded that such research is important and worth paying attention to.

In particular, with respect to Indonesia, careful monitoring of what women were being told about the method and of other aspects of provider–client exchanges should have been institutionalized during the early phases of Norplant introduction. Only limited research on the quality of Norplant services was conducted during the early stages of Norplant introduction. In 1989, three years after Norplant had been incorporated into the national family planning program, the Yayasan Kusuma Buana Foundation (YKB), with the support of the Population Council, surveyed 342 Norplant users on their attitudes toward the method. Results indicated low levels of knowledge among users, particularly with regard to expected side effects and the necessity of removing the implant after five years (YKB, 1989). Yet, because of a lack of attention from policymakers and program managers, poor counseling apparently continued to characterize Norplant service delivery. Previous research in Indonesia and elsewhere has suggested that “the close linkages between access and quality mean that improvements in one tend to strengthen the other” (Shelton and Davis, 1996: 233). Thus, if Indonesian family planning policymakers and program managers emphasized client satisfaction over the generation of new family planning acceptors, potential users of all methods would be more likely to receive adequate information on the available methods, leading to more appro-

priate method selection, higher user satisfaction, and probably greater acceptance and higher continuation rates as well.

Notes

- 1 The Norplant implant consists of six match-sized, silastic capsules containing progestin that are inserted in the upper arm. The progestin is released continuously through the capsules' walls. According to the United States Food and Drug Administration, Norplant provides effective contraception for five years. The cumulative pregnancy rate at five years is 3.9 per 100 users (The Population Council, 1993).
- 2 Brief histories of the introduction of the Norplant implant in Indonesia are available from several sources (Sutedi et al., no date; Harvey et al., 1989; YKB, 1989). Accounts of the design and implementation of Indonesia's government family planning program and its implications for contraceptive choice can be found in McNicoll and Singarimbun (1983), Warwick (1986), and Hull and Hull (1995).
- 3 Hull and Hull (1995: 29) refer to “controlled choice” (*bebas pilih tetapi terkendali*) to describe this process, a term, they note, that is “analogous to the ‘guided democracy’ of Indonesian polity more broadly.” For a fuller discussion of Haryono Suyono's views, see Suyono (1994).
- 4 At least among policymakers at the BKKBN, mass programs are no longer referred to as safaris (Fisher et al., 1997).
- 5 The Indonesian DHS did not include a code for safari as a possible source of contraceptive service.
- 6 Common side effects are those that have been reported by the users themselves. Certain side effects are classified as “common” by the Population Council in its *Manual for Clinicians* (Population Council, 1990). According to the manual, the most common side effects are those related to changes in menstrual patterns.
- 7 The large differences in 12-month continuation rates between IUD users and Norplant users is probably not related to a lack of information about early removal. Virtually no difference is found in the 12-month continuation rates by knowledge of early removal.
- 8 High continuation rates have also been reported in other countries. A study of four counties in rural China reported first- and second-year continuation rates of 96 and 88 percent (Zenger et al., 1995). A study conducted in Bangkok reported continuation rates of 98 percent at one year, 83 percent at three years, and 71 percent at five years (Chompootawee et al., 1996).

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