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The Norplant® Contraceptive: An Indonesian Experience

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**THE NORPLANT® CONTRACEPTIVE:
AN INDONESIAN EXPERIENCE**

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Use-Dynamics Study: Final Report.

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ABSTRACT

Indonesia's national family planning program constitutes the largest introduction of NORPLANT® contraceptives in the world. As of July 1992, the number of implant insertions exceeded 1.57 million and constituted six percent of family planning users. This follow-up sample survey of 3,107 implant acceptors and 436 providers and field workers from West Sumatra and West Java in February-August 1992 is a first not only for Indonesia but for the international community concerned with the method. Its primary objective was to provide information for the National Family Planning Coordinating Board (BKKBN) and other Indonesian and international family planning organizations to improve the quality of NORPLANT® contraceptive services and increase their effective use. Special attention was paid to overall use-effectiveness, continuation rates among acceptors and *quality of services*, including counseling, degree of informed choice, frequency of post-insertion complications, prevalence and management of side effects, and availability and ready access to removal on demand. With the first group of women having five years of experience with the implants in 1991 and the first removals occurring, these findings are critical to program planning. A summary of findings of this Operations Research study of contraceptive use dynamics conducted by the Population Council as part of its Asia and Near East Operations Research and Technical Assistance Project, and BKKBN under subcontract with Andalas University and BKS-PENFIN is in the Executive Summary.

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This study was sub-contracted to the National Family Planning Coordinating Board (BBKBN) by the Population Council under USAID's Asia and Near East Operations Research/Technical Assistance Project. BKKBN sub-contracted to the BKS-PENFIN for West Java and the Andalas University for West Sumatra. Mr. Peter Miller of the Population Council helped pretesting and designing the survey questionnaire. Dr. George Cernada ANE OR/TA Project Director, and John Ross, Senior Associate, reviewed and edited the article.

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EXECUTIVE SUMMARY

Indonesia's national family planning program constitutes the largest introduction of the NORPLANT® implant in the world. The country's program is now at a critical stage, with the first five-year removal having occurred in late 1991. The NORPLANT® implant Use-Dynamics Study, the first ever of its kind, was conducted to investigate use-dynamics and the quality of NORPLANT® contraceptive service provision in Indonesia.

In Indonesia, the addition of the NORPLANT® implant in the national program has broadened the range of contraceptive choice available to Indonesian women. Its availability has not only attracted new women to enroll as acceptors but also provides ample opportunity for current family planning acceptors to switch methods.

A total sample of 3,107 NORPLANT® implant acceptors and 436 providers and field workers from West Sumatra and West Java were interviewed. Fieldwork was undertaken during February - March 1992 in West Sumatra and during July - August 1992 in West Java. Non-response rates were less than five percent (66 cases) in West Sumatra and 12 percent (242 cases) in West Java. Of the lost to follow-up cases, 20 and 161 had moved from the areas in West Sumatra and in West Java respectively.

The study finds that the continuation rate over a four-year period was about 80 percent in both provinces and in most sub-groups. The rate over a five-year period decreases to 55 percent in West Sumatra and 33 percent in West Java. The fall-off suggests that many acceptors are returning for removal at or just before the five year deadline, as they should. In both provinces, the probability of terminating use due to medical reasons is much higher than other reasons through the fourth year. The five-year failure rate was two percent in West Sumatra and 0.4 percent in West Java.

Substantial proportions of NORPLANT® implant acceptors are young, with small families, many adopt it for spacing. Fifty-eight percent of the acceptors in West Sumatra and 72 percent of the acceptors in West Java were under 30 years old at the time of insertion. In West Sumatra, nearly half of the acceptors surveyed had at least 1-3 living children, and in West Java the majority (70 percent) had only 1-3 living children.

More than one-third of acceptors in West Sumatra had never used a family planning method before the NORPLANT® implant while in West Java this figure was only 18 percent. The majority (more than two-thirds) of the acceptors chose the NORPLANT® implant as a childbirth spacing method while one-third chose the method for terminating childbearing. At the time of the survey, 28 percent of acceptors in West Sumatra and 39 percent in West Java said they wanted more children.

Information concerning NORPLANT® implants was provided to the acceptors most often by field workers and community volunteers. The majority of acceptors knew that the NORPLANT® implant has six capsules; is effective for five years; and needs to be removed after five years of use. However, only 33 percent of acceptors in West Java and 60 percent of acceptors in West Sumatra knew that the implants could be removed before five years. The percentage of acceptors who knew of the NORPLANT® implant's common side-effects was 26 percent in West Java and about 30 percent in West Sumatra.

According to the providers interviewed in this study, adequate NORPLANT® information materials are not available at their clinics. A large majority of providers, field workers, and community volunteers expressed that there ought to be IEC materials for themselves and for their clients. Most NORPLANT® implant acceptors who were either not satisfied or not sure whether they were satisfied with the information provided to them on the implant demand to have information on the availability of removal, side-effects, and what to do if problems occur.

The level of knowledge regarding the implant is low among most providers, field workers, and volunteers. In particular, most health workers do not know: that it can be removed before five years; is effective within a few hours of insertion; the exact timing of insertions; conditions under which the implant can be damaged; the five-year expiration period; and its release of progestin in continuous low doses. But most providers, field workers, and community volunteers do know that the NORPLANT® implant may bring changes in the menstrual bleeding pattern and that this is the most common side-effect of the implants.

Of the number of doctors surveyed, just over one-half reported to have received training in NORPLANT® implant insertion. With regard to midwives, three-fourths in West Java and approximately one-third in West Sumatra had also attained NORPLANT® implant training. Most field workers (S. PLKBs, PLKBs and PPKBDs) in both West Sumatra and West Java have not yet received any NORPLANT® implants training.

The majority of acceptors in both West Sumatra (77 percent) and West Java (66 percent) experienced no problems at insertion site. Approximately three percent of acceptors in West Sumatra and five percent in West Java reported having infection at insertion sites. A small percentage of acceptors reported other complaints, including pain, itching, and numbness at the insertion site. Recommended aseptic conditions are not consistently maintained during NORPLANT® implant service delivery.

More than one-half of the acceptors in both provinces experienced a change in menstrual pattern. The most frequently reported menstrual disturbances include amenorrhea, scanty period, spotting between periods, prolonged bleeding, or longer and heavier bleeding than normal. Other adverse side-effects reported by small proportions of respondents are headache, nausea or other hormonal effects, and heart related symptoms.

According to doctors and midwives, they do not have adequate facilities for the delivery of the different components of NORPLANT® implant service, but they have all equipment required for insertions and removals, with the exception of examination tables.

Findings also suggest that an overwhelming majority of current users wished to continue NORPLANT® implant use for the full five-years. An overwhelming majority of NORPLANT® implant acceptors indicated that they were satisfied with the NORPLANT® implant and it is the preferred method among current users and those who discontinued after the fifth year. Moreover, of those who discontinued the implants use, less than one-third in West Sumatra and approximately one-half in West Java continued contraceptive use with another method.

However, among current users, a large proportion revealed that they are not sure whether or not they will have the implants re-inserted after discontinuing the implants use. Of those who did not wish to have the implants re-inserted, only one-fourth want to adopt a different contraceptive method. This could result in a serious set back in contraceptive use in Indonesia.

The data from this study revealed that very early removal of the NORPLANT® implant (defined as < 1 year of use) was less than five percent for both provinces and the most frequent reasons for removing before 12 months were medical followed by non-medical, which includes termination due to undetected pregnancy before insertion. The study findings also suggest that the proportion of NORPLANT® implant acceptors who did not show up for removal after five years is not substantial. But, in Indonesia as a whole, it is likely that the number of acceptors requiring the five year removals will increase dramatically over time due to the increase in NORPLANT® implant users.

The family planning acceptor's card (K-IV), if properly filled, can serve as a good record for acceptor follow-up and to trace the date of removal. Approximately one-half of the acceptors were able to produce their acceptor card at the time of the interview.

There was very little or no verbal interaction between the service provider (doctor or midwife) and the client before and after insertions. Once a woman received the implants, interaction between the acceptor and provider occurred only if the client faced complications. In general, most NORPLANT® implant acceptors interviewed in this study reported that they are satisfied with the services which they have been receiving. But of those acceptors who were not satisfied with the services, inadequate counseling and information, poor personal treatment, a long waiting time for the service, clinic too far away, and inadequate facilities were the most common causes of dissatisfaction. Some revealed that they did not have the choice of alternative methods.

The obvious implications of this survey findings are: (1) the need for information to providers, field workers, volunteers, and clients; (2) immediate retraining of trainers; (3) a small scale demonstration study to improve knowledge of providers, field workers, volunteers, and clients; (4) a study to review the tracking system for 5 year removal; (5) institutionalization of the NORPLANT® implant method into all training programs which have a Family Planning component; and (6) preparation of back-up materials for providers and information through different media outlets: oral, printed matter for illiterate and literate, radio, television and videotape.

1. INTRODUCTION

1.1 Background

Indonesia's national family planning program constitutes the largest and most ambitious introduction of NORPLANT® implant contraceptives in the world. Since 1985/1986 when the NORPLANT® implant contraceptive was made available in all 27 provinces, the number of annual NORPLANT® contraceptive insertions has risen dramatically, with the cumulative number of insertions estimated to exceed 1.57 million as of July 1992. In terms of contraceptive mix, NORPLANT® implant contraceptive users constitute approximately six percent of the total number of family planning users. The Contraceptive Prevalence Rate (CPR) is approximately 50 percent according to the 1991 Indonesia Demographic and Health Survey¹.

The provision of the NORPLANT® contraceptive in Indonesia reflects the commitment of program managers to increase contraceptive choice and their ability to successfully incorporate innovations into the national family planning program.

The BKKBN is the primary agency involved with family planning activities. The BKKBN, which has planning, coordinating and monitoring roles, also has important implementing responsibilities that are carried out by family planning field supervisors (PPLKB), field workers (PLKB), and village volunteers (PPKBD). The BKKBN has provincial, district, sub-district, and village level units.

The DEPKES, in co-ordination with the BKKBN, delivers clinic-based family planning services through health institutions, including hospitals, health centers, and integrated health services (Posyandu). The DEPKES's responsibilities include policy formulation, planning, coordination and supervision of health services, provision of contraceptive information and services and medical back-up for complications, and fertility-related health interventions. Family planning services including NORPLANT® implant contraceptive are also made available through mass programs.

Mass programs, referred to as "Safaris", are organized to provide basic health services, including various types of family planning services such as sterilization, IUD, injectables, and NORPLANT® implants, or to provide a single service. "Safaris" are usually conducted in association with a special national or local event such as Independence Day or the anniversary of the Indonesian Doctors Association (IDI). This

¹ Central Bureau of Statistics, National Family Planning Coordinating Board, Ministry of Health and Demographic and Health Surveys, IRD/Macro International, Inc. (1991), Indonesia Demographic and Health Survey, 1991: Final Report Tables.

is regarded as "a social and cultural institution in Indonesia which builds on the knowledge that individuals are influenced by, and confident in, activities that are done in connection with peer groups"². Mass programs are locally organized at regular health institutions or other public facilities by either the Armed Forces, the Police Force, local authorities, non-government organizations, such as Dharma Wanita (Women's Group), and professional organizations.

Although the Indonesian NORPLANT[®] contraceptive program is unique in terms of its scale and the pace of its expansion, it also characterizes many of the operational problems that other developing countries are likely to confront as they expand their NORPLANT[®] implant contraceptive programs. Many of the concerns pertaining to large-scale expansion of NORPLANT[®] contraceptive services in developing countries--such as screening and counseling, use-effectiveness, ensuring removal on demand, and tracking and notification systems for five year removal--can presently only be satisfactorily answered through research on the Indonesian program³. Operations Research on issues related to the NORPLANT[®] implant contraceptive within the Indonesian program will be of immediate and direct relevance to the growing number of NORPLANT[®] contraceptive programs in other developing countries.

1.2 Need for the Study

Much remains unknown about many aspects of NORPLANT[®] contraceptive service delivery and use-dynamics. For example, overall use-effectiveness and continuation rates among acceptors in the national program, as well as the proportions of women discontinuing the method early on or using the NORPLANT[®] contraceptive beyond five years, are still unknown.

Similar questions remain about the quality of services received by NORPLANT[®] contraceptive clients regarding such aspects as: the counseling received and the degree of informed choice; the frequency of post-insertion complications and infections; the prevalence and management of side effects; and the availability of and ready access to removal on demand. Also of central interest is the issue of how NORPLANT[®] contraceptive use patterns vary according to, and are influenced by, client characteristics, geographical settings, and service delivery characteristics.

² Sheila J. Ward, Ieda Poernomo Sigit Sidi, Ruth Simmons and George Simmons (1990), Service Delivery Systems and Quality of Care in the Implementation of NORPLANT in Indonesia. Report prepared for The Population Council, New York. February. _

³ A consensus emerged among participants in the workshop on the Introduction of NORPLANT[®] Services held in Jakarta in December 1990.

While several studies of NORPLANT® contraceptive use have been undertaken in Indonesia, the current data is either based upon special populations of NORPLANT® contraceptive acceptors from the pre-introductory trial phase or the design does not permit one to follow NORPLANT® contraceptive use among a representative cohort of NORPLANT® contraceptive acceptors over time⁴. Therefore, this current survey which is representative of all NORPLANT® contraceptive acceptors in two provinces-- both continuers and discontinuers-- was conducted in order to provide essential information that the BKKBN and other Indonesian and international family planning organizations can use to improve the quality of NORPLANT® implant services and to increase the effective use of this method.

The primary objective of this study is therefore, to fill many of the existing information gaps related to NORPLANT® contraceptive use-dynamics and the factors which influence it.

1.3 Field Work

At the provincial level, this study was sub-contracted to the Andalas University for research carried out in West Sumatra and The Coordinating Board of Indonesian Fertility Research (BKS-PENFIN) for West Java. The Population Council and the BKKBN provided assistance to carry out the study in all phases of the project including design of the questionnaire, sampling, training of field staff, monitoring of data collection, data processing and analysis, preparation of final report, and dissemination of the findings.

The entire NORPLANT® Contraceptive Use-Dynamics Study was completed within 15 months (December 1, 1991 to February 28, 1993). The only delay experienced was in the West Java field work for which re-visits were required to find migratory respondents. The field work for the acceptors' survey was divided into two phases: West Sumatra in the first half of 1992 and West Java in the second half of 1992 (after the June national election). The West Sumatra field work to collect data on acceptors began on February 11, 1992 and was completed on April 16, 1992. The providers' survey in West Sumatra was started on July 10 and completed in ten days. The entire West Java field work was completed in three months (approximately period July 25- October 25, 1993).

Interviewers located respondents with the help of local PPKBDs and PLKBs. The West Sumatra field team faced several problems: migratory cases in city areas; finding respondents during Ramadhan as women often go to market to sell their goods; and women refusing to be interviewed because they were using the implants without their husbands' knowledge. The problems encountered in West Java were due to: internal

⁴ M. A. Koenig's trip report on Jakarta (December 9-16, 1990).

and international migration; difficult terrain and the lack of adequate transportation; and incomplete/incorrect identification of respondents.

The Andalas University employed 14 interviewers for the West Sumatra study-four female and ten male. All were recent graduates of the Nutrition Faculty and waiting for their assignments from the government. Most of them had worked in previous studies conducted by the University. The West Sumatra study was supervised by the Principal Investigator and three field supervisors.

The BKS-PENFIN had a total of 28 interviewers and 10 field supervisors for the West Java study. Out of the 28 interviewers, ten were female and 18 were male. Interviewers from the Lebak Regency were high school graduates while university graduates were recruited for the Cianjur Regency. Interviewers for Bandung kabupaten were medical students and from other disciplines, such as agriculture, communication, and social affairs. Unlike in West Sumatra, interviewers for West Java were recruited locally. All field supervisors were from local regencies and they were either from BKKBN or DEPKES offices and supervised by the Principal Investigator.

Interviewer and supervisor trainings were conducted separately for West Sumatra and West Java. The four-day⁵ intensive training included: background and purposes of the NORPLANT[®] Contraceptive Use-Dynamics Study; role of interviewers and supervisors; what the NORPLANT[®] contraceptive is and how it works; interviewing techniques; and familiarization of acceptor and provider questionnaires. In addition, the training emphasized how to collect quality data and procedures to ensure quality.

The trainings were carried out by the principal investigators, senior staff of the respective agencies, a NORPLANT[®] contraceptive specialist, and BKKBN's senior staff involved in the study. The trainers employed different training techniques, including lectures, role playing, and field practice.

1.4 Response Rate

A total of 1,400 NORPLANT[®] contraceptive acceptors were expected in West Sumatra and 2,100 in West Java. The final sample sizes, however, included only 1,353 in West Sumatra and 2,067 in West Java. Difference between the expected sample size and the actual sample size appeared due to two reasons. First, some sampled clinics were found to have fewer NORPLANT[®] contraceptive acceptors than the provincial BKKBN statistics showed. Second, some NORPLANT[®] contraceptive acceptors had more than one family planning clinic card (K-IV).

⁵ Duration of training was only three days in West Sumatra while it was four days in West Java.

Of the 1,353 sampled NORPLANT® contraceptive acceptors in West Sumatra, a total of 1,287 were successfully interviewed--a response rate of 95 percent. The response rate is 7 percentage points lower in West Java (88 percent). In West Sumatra, the five percent of non-response cases constitute mainly 'refusal' and 'moved' while a large part of the non-responses in West Java constitute acceptors who 'moved' to other destinations including those 59 acceptors who went abroad to work. Two percent of the West Java acceptors could not be found at home even after three attempts were made to interview them. 'Other' reasons for non-response included "dead", "non-NORPLANT® contraceptive acceptor", and "house not found".

A total of 156 and 280 providers (doctors and midwives) and field workers (PPLKBs, PLKBs, and PPKBDs) were interviewed in West Sumatra and West Java respectively. The West Sumatra team felt that it was, in general, more difficult to meet with providers than acceptors due to the providers' work schedules which required them to be in clinics. In West Sumatra, there were 19 less providers and in West Java five less providers than expected to be interviewed since some providers were not available at the time of the field survey.

1.5 Methodology

1.5.1 Diagnostic Study

A Diagnostic Study of a much smaller scale was carried out before the Use-Dynamics Study. The Diagnostic Study had two broad objectives: a) to obtain information to guide the development of the larger Use-Dynamics Study and b) to supplement existing information on implant service delivery with a field-based observation study to assist BKKBN in making necessary decisions within its implant program.

The Diagnostic Study included two activities: field visits to six clinics in each of the two provinces and follow-up interviews with samples of ten acceptors from each clinic. Findings and experiences from this study helped guide detailed planning, designing and development of the larger study on NORPLANT® Contraceptive Use-Dynamics. See Issue One of this *OR Working Papers Series*.

1.5.2 Sampling Design

A multi-stage sampling design was adopted to select kabupatens within the selected provinces, clinics, implant acceptors and providers samples for the Use-Dynamics Study.

Allowing for non-response, samples of 1,400 new NORPLANT® contraceptive acceptors from West Sumatra and 2,100 acceptors from West Java were selected randomly with probability proportion to its size (PPS). Sample sizes were determined based on the minimum number of cases required for estimating continuation rate at the 60th month⁶.

First Stage Sampling

In West Sumatra, the first stage of sample selection of kabupatens was purposive. The Andalas University proposed three kabupatens for the study: Padang Municipality (which is in fact largely rural), Padang Pariaman to the Northwest, and Pesisir Selatan to the Southeast. These kabupatens include relatively few areas which are difficult to reach and also represent the general experience with NORPLANT® contraceptive throughout the province.

In West Java, kabupatens were selected based on two criteria: representative sample of West Java and consideration of kabupatens remained to be studied. In order to meet these criteria, the 24 kabupatens in West Java were first stratified by region (Northern, Western, Central, and Eastern). The northern region, which will be covered in a similar study (Study on Tracking of NORPLANT® Acceptors), was excluded from the selection list for this study. Tangerang Kabupaten is strongly influenced by Jakarta because of its proximity and was, therefore, also removed from the sample frame. Two municipalities (Bogor and Bandung) were combined with their respective kabupatens. Three kabupatens (Bandung, Cianjur and Lebak) were randomly selected with probability proportion to its size (PPS) from a total of 11 kabupatens (Lebak, Serang, and Pandeglang from the Western region; Bogor, Sukabumi, and Cianjur from the Central region; and Bandung, Tasikmalaya, Garut, Sumeday, and Ciamis from the Eastern region). This sample design is essential in creating a representative sample of West Java (including the Northern region), since each kabupaten is unique in its population characteristics.

Second Stage Sampling:

The second stage sampling involved the selection of clinics within the selected kabupatens. A list of clinics from each sample kabupaten was reviewed, and clinics with fewer acceptors (less than 11 in West Sumatra and less than 35 in West Java) were excluded. In addition, four island clinics in Padang Pariaman regency of West Sumatra, which are difficult and dangerous to reach during the period of the fieldwork, and three clinics in Pesisir Selatan, for which data were unavailable or clearly unreliable, were also excluded.

⁶ It turned out that the number of cases was barely enough to reliably estimate the 60th month continuation rate.

Following this design, sample selection involved: a) ordering and listing clinics with cumulative measures of size (total implant acceptors from provincial records), and b) drawing a systematic sample. For West Sumatra, this resulted in a sample of 40 clinics from three kabupatens with PPS, (from a frame of 67 clinics representing all clinics in the three sampled regencies) (Appendix 3.1). The sampling interval was $13,314/40 = 332.85$. The random start for the systematic sample was 105. For West Java, a sample 60 clinics (20 from each of the three selected kabupatens) were selected with PPS procedures.

Third Stage Sampling:

The selection of acceptors was completed using the registration books and K-IV forms. In each clinic, the sampler (supervisors) physically assembled as complete a collection of acceptor records as possible, starting with the registration books and filling in any gaps with K-IV forms or other records as available, ordered chronologically by date of acceptance.

After making a careful count of all acceptors listed, a fixed number of 35 acceptors per clinic was sampled by dividing the total count by 35 (the number of sampled acceptors per clinic) to obtain the sampling interval, and then drawing a random number within that interval as the random start. The sampling interval was added to the random start, and the integer part was used for the number of the second acceptor; and so on until 35 acceptors were chosen (i.e., standard systematic sampling). The sampled acceptors were listed, along with address information, date of acceptance, and date of removal if available, on the first page of each questionnaire.

The selection of providers was based entirely on their availability at the selected clinics. From each selected clinic or clinic area, one of each doctor, midwife, supervisor, field worker, and volunteer were selected as respondents. If there were more than one of the above providers in the clinic, one was selected randomly.

1.6 Data Collection

Two types of data collection instrument--Acceptors' Questionnaire and Providers' Questionnaire--were used to collect data. These questionnaires were first developed in English and translated into Bahasa Indonesia for the pre-testing. The questionnaires were finalized based on the pre-test results.

The Provider's Questionnaire was designed to complement the acceptor data by collecting information on knowledge, technical competency, adequacy of training and support services (equipment, supplies, IEC and recording and reporting), and opinions of NORPLANT providers and field workers.

2. RESPONDENT CHARACTERISTICS

2.1 NORPLANT® Contraceptive Acceptors

A total of 3,107 NORPLANT® acceptors (1,287 in West Sumatra and 1,820 in West Java) provided information to the NORPLANT® Contraceptive Use-Dynamics Study. The respondents' (1) Demographic (2) Socio-economic and (3) Fertility Preference and Family Planning characteristics are discussed below.

2.1.1 Demographic Characteristics

Table 2.1 presents four variables pertaining to the respondents' demographic characteristics: respondent's age at the time of the study, age at insertion, number of living children, and age of youngest child at the time of insertion.

The data indicates that the majority of the respondents fall within in the age-group 25 - 39 years in both West Sumatra (78 percent) and in West Java (70 percent). On the average, respondents from West Java (mean = 29.4 years) are approximately three years younger than their counterparts from West Sumatra (mean = 32.7 years). This pattern is also reflected in 'age at insertion'. In West Java, 13 percent of the respondents had NORPLANT® contraceptive inserted before their 20th birthday while in West Sumatra this figure was only six percent. The mean ages at insertion were 28 years and 26 years in West Sumatra and West Java respectively. Though these means do not show the size of the real difference, the two provinces differ greatly in acceptor ages. At acceptance, 58 percent are below age 30 in West Sumatra and 72 percent in West Java. Similarly, at interview, 28 percent and 52 percent are below age 30 respectively.

Table 2.1 also indicates that respondents with less than three living children constitute nearly 50 percent of all respondents in West Java and approximately 25 percent in West Sumatra. A small percentage of respondents (under one percent) did not have any children at the time of insertion. The last panel of Table 2.1 also indicates that the interval is about four years (4.4 years for West Sumatra and 3.6 years for West Java) between the youngest child and the date of NORPLANT® contraceptive insertion. Approximately seven to nine percent of NORPLANT® contraceptive users accepted the method before the first birthday of their last child.

Table 2.1 : Percentage Distribution of NORPLANT® Contraceptive Acceptors by Demographic Characteristics

Demographic Characteristics	West Sumatra (1,287)	West Java (1,820)
<u>Current age</u>		
15 - 19	0.5	2.4
20 - 24	8.7	19.7
25 - 29	19.1	30.2
30 - 34	31.9	25.9
35 - 39	26.0	14.3
40 - 44	10.2	6.5
45 - 49	3.7	1.0
Total	100.0	100.0
Mean (years)	32.7	29.4
<u>Age at insertion</u>		
< 19	5.7	12.6
20 - 24	19.3	29.3
25 - 29	32.7	29.8
30 - 34	26.7	17.9
35 - 39	12.1	8.6
40 - 44	3.5	1.6
45 - 49	0.1	0.1
Total	100.0	100.0
Mean (years)	28.4	26.3
<u>Number of living children</u>		
0	0.2	0.7
1	7.4	22.2
2	17.9	25.9
3	20.6	22.2
4	21.1	14.5
5	13.8	8.0
6+	19.0	6.6
Total	100.0	100.0
Mean	3.9	2.8
<u>Age of youngest child at insertion</u>		
<12 months	7.4	9.1
1 year	6.4	7.5
2 years	7.8	15.7
3 years	10.3	16.7
4 years	16.4	12.4
5 years	20.0	11.9
6 years+	31.8	26.6
Total	100.0	100.0
Mean (years)	4.4	3.6

Notes: Figures in parentheses indicate number of respondents. Percentages may not add up to 100 because of rounding.

2.1.2 Socio-economic Characteristics

The Use-Dynamics Study shows that a large majority of the respondents and their spouses have received some formal education. The number of respondents and spouses who completed middle school is slightly higher in West Sumatra than in West Java (Table 2.2). The majority of respondents (60 percent in West Sumatra and 75 percent in West Java) do not have any paid employment. Almost one-third of respondents in West Sumatra are engaged in 'agriculture/ fishery/ others' while West Java respondents in this category constitute less than one-fifth of the total. The last panel of Table 2.2 shows that virtually all respondents' spouses are engaged in paid employment. More than two-thirds are involved in 'agriculture/ fishery/others' and approximately one-fourth in 'government/ commerce/trade'. The percentage distributions by type of paid employment in West Sumatra and West Java are almost identical.

Table 2.2: Percentage Distribution of NORPLANT® Contraceptive Acceptors by Socio-Economic Characteristics

Socio-economic Characteristics	West Sumatra (1,287)	West Java (1,820)
<u>Educational attainment</u>		
None	6.3	8.1
< primary	43.0	46.3
Primary	38.0	38.8
Middle	9.2	4.0
High+	3.6	2.9
Total	100.0	100.0
<u>Spouse's Educational attainment</u>		
None	3.4	3.7
< primary	28.2	32.5
Primary	45.4	48.3
Middle	12.5	7.9
High+	10.5	7.6
Total	100.0	100.0
<u>Type of paid employment</u>		
None	60.3	74.9
Govt./Commerce/trade	10.7	6.3
Agriculture/fishery/others	29.0	18.8
Total	100.0	100.0
<u>Spouse's type of paid employment</u>		
None	0.4	1.8
Govt./Commerce/trade	22.8	23.6
Agriculture/fishery/others	76.8	74.7
Total	100.0	100.0

Notes: Figures in parentheses indicate number of respondents. Percentages may not add up to 100 because of rounding.

Table 2.3: Percentage Distribution of NORPLANT® Contraceptive Acceptors by Fertility Preference and Family Planning Characteristics

FP and Fertility Preference Characteristics	West Sumtara (1,287)	West Java (1,820)
<u>Previous use of family planning</u>		
None	36.1	18.5
IUD	8.0	2.6
Injectable	31.1	50.2
Pills	24.8	28.6
Others	-	0.1
Total	100.0	100.0
<u>Switch to NORPLANT® directly</u>		
Yes	35.4	55.7
No	28.4	25.8
No previous use	36.2	18.5
Total	100.0	100.0
<u>Purpose of NORPLANT® use</u>		
Stopping	33.9	28.8
Spacing	64.4	67.5
Don't know	1.7	3.7
Total	100.0	100.0
<u>Want more children</u>		
Want more	28.4	39.1
Want no more	42.6	34.2
Don't know	29.0	26.7
Total	100.0	100.0
<u>Location of Service</u>		
Health Center	53.5	34.5
Public hospital	7.2	3.8
Other public health facility	9.5	1.7
Private clinic or hospital	1.9	2.5
Posyandu	5.8	17.3
Others	22.1	40.2
Total	100.0	100.0
<u>Type of Provider</u>		
Doctor	15.9	21.3
Midwife	75.2	58.4
Others	7.3	11.7
Don't know	1.6	8.6
Total	100.0	100.0
<u>Type of Service Site</u>		
Safari Service	53.9	73.2
Group Service	32.9	16.4
On Own	13.1	10.0
Don't Remember	-	0.4
Total	100.0	100.0

Note: Figures in parentheses indicate number of respondents. Percentages may not add up to 100 because of rounding.

2.1.3 Fertility Preference and Family Planning Characteristics

Almost two-thirds of the NORPLANT® contraceptive acceptors in the West Sumatra sample reported having used some other form of contraception before accepting the implant (Table 2.3). This proportion is even higher in West Java (82 percent). The percentage of respondents who have used injectables is highest, followed by oral pills. Of those who used other contraceptives, the majority switched to NORPLANT® contraceptive directly, without interruption in contraceptive use.

In both West Sumatra and West Java, at the time of NORPLANT® contraceptive insertion, the majority of respondents (approximately two-thirds) accepted the implants for the purpose of spacing. About one-third used this method with the intention of having no more children in the future. This information may be biased due to memory lapse since respondents were asked to state their purpose of the NORPLANT® contraceptive use at the time of insertions. The fourth panel of Table 2.3 reveals that 43 percent in West Sumatra and 34 percent in West Java did not want more children at the time of the survey. While about one-third of the respondents wanted more children, fewer than one-third did not know whether or not they wanted more children.

The majority of respondents in both West Sumatra and West Java received their implant services at health institutions, inserted by midwives, and during Safari or Group Services. The percentage of respondents who received services at non-clinical settings (i.e. others) is higher in West Java (40 percent) than in West Sumatra (22 percent).

2.2 NORPLANT® Contraceptive Providers

This section describes the characteristics of providers (medical doctors & midwives) and field workers including supervisors (S.PLKB), field workers (PLKB), and community volunteers (PPKBD). Selection of these health workers was based on the availability of the workers in the sampled clinics at the time of the survey. Although these workers and respondents (NORPLANT® contraceptive acceptors) were from the same clinics or clinic areas, the workers surveyed did not necessarily provide services to the survey respondents at the time of insertions.

In West Sumatra, more than one-half (60 percent) of the doctors have worked for less than 2 years in the present clinics while the majority of midwives have been working for at least three years. More than three-fourths of PLKBs and PPKBDs have been working in the sample areas for at least three years. Mean lengths of service in the present location are 22 months for doctors, 85 months for midwives, 42 months for S. PLKBs, 59 months for PLKBs, and 96 months for PPKBDs.

In West Java, the majority of providers and field workers have been working

in the present location for at least two years. Average lengths of service at the present location vary between 35 months for doctors and 79 months for PKKBDs.

Of the doctors surveyed, just over one-half reported having received training in NORPLANT® contraceptive. Reported training includes formal and informal trainings organized by BKKBN or other agencies. With regard to midwives, three-fourths in West Java and approximately one-third in West Sumatra had also attained NORPLANT® contraceptive training. Most field workers (S. PLKBs, PLKBs, and PKKBDs) in both West Sumatra and West Java have not yet received NORPLANT® contraceptive training. Only a very small proportion of the field workers in West Sumatra have had any training in contraceptives (see Table 2.4).

Table 2.4: Percentage Distribution of NORPLANT® Contraceptive Providers and Field Workers by Training Characteristics

Characteristics	Doctor	Midwife	S.PLKB	PLKB	PKKBD
<u>West Sumatra</u>	(27)	(32)	(27)	(35)	(35)
<u>NORPLANT® Training Received</u>					
Yes	59	31	4	3	0
No	41	69	96	97	100
Total	100	100	100	100	100
<u>Contraceptive Training Received</u>					
Yes	70	56	37	14	3
No	30	44	63	86	97
Total	100	100	100	100	100
<u>West Java</u>	(56)	(57)	(49)	(56)	(62)
<u>NORPLANT® Training Received</u>					
Yes	59	75	0	2	0
No	41	25	100	98	100
Total	100	100	100	100	100
<u>Contraceptive Training Received</u>					
Yes	70	91	0	2	0
No	30	9	100	98	100
Total	100	100	100	100	100

Note: Totals may not add up to 100 because of rounding.
 Figures inside parentheses indicate number of cases.

Of the doctors in West Sumatra and in West Java who received NORPLANT® contraceptive training or general contraceptive training, two-thirds had a maximum of five days of training. Approximately two-thirds of the midwives in West Java also had a minimum of six days of training whereas more than two-fifths (44 percent) in West Sumatra received only 1 or 2 days of training. More than two-thirds of doctors and midwives reported that the training included insertion and removal procedures, screening and counseling, aseptic techniques, follow-up procedures, and management of complications. On an average, doctors and midwives inserted NORPLANT® contraceptive into two women and removed NORPLANT® contraceptive from one woman during the training period, with the exception of midwives from West Java who removed NORPLANT® contraceptive from four women during training. One of the limitations of this study is that it cannot assess the quality of training.

3. THE QUALITY OF NORPLANT® SERVICES

Providing contraceptive services consists of three basic activities: communicating with acceptors; providing information and education; and providing care or treatment during and after the contraceptive service delivery. Chapter 5 covers various aspects of service delivery systems including respondents' knowledge of basic information concerning the NORPLANT® contraceptive and its side-effects.

3.1 Knowledge

Respondents were asked a series of basic questions to determine their knowledge regarding the NORPLANT® contraceptive. The responses are summarized in Table 3.1. Knowledge of removal at the end of the fifth year and the five years effectiveness of NORPLANT® implant was almost universal among the NORPLANT® contraceptive acceptors. Knowledge that NORPLANT® contraceptive has six capsules varied by province. Approximately 83 percent of the acceptors in West Java and 70 percent in West Sumatra knew that the NORPLANT® implant has six capsules. Acceptors were least knowledgeable about the possibility of removal before five years. Fifty-nine percent of acceptors in West Sumatra knew that capsules could be removed before five years compared to 34 percent of acceptors in West Java.

Table 3.1: Percentage of NORPLANT® Contraceptive Acceptors Having Knowledge on Particulars of NORPLANT® Contraceptive

Knowledge variable	West Sumatra	West Java
<u>At the time of survey</u>		
Knew it has six capsules	69.7	83.3
Knew it is effective for five years	88.6	92.9
Knew it should be removed at the end of five years	94.7	92.9
Knew it can be removed before five years	59.4	33.5
Number of respondents	1,287	1,820

Note: Each category is treated as a dichotomous variable.

Data from this survey reveal that knowledge of removal before five years does have an effect on the request for early removal. Of the women who were currently using NORPLANT® contraceptive and had requested removal, 53 percent in West Sumatra and 35 percent in West Java knew that the implants could be removed

before five years. Forty percent and 66 percent of respondents, in West Sumatra and in West Java respectively, did not know that the implants could be removed before five years.

In West Java, a larger percentage of younger acceptors and acceptors with fewer children knew of removal before five years than older acceptors and acceptors with more children. In West Sumatra, the age of youngest child at acceptance has a strong relationship with acceptors' knowledge of removal before five years. About 68 percent of acceptors whose youngest child was less than three years old at the time of acceptance knew of NORPLANT® contraceptive removal before five years. The proportion drops to 55 percent among acceptors whose youngest child was five or more years old at the time of acceptance (no table).

Table 3.2 presents information on acceptors' knowledge of NORPLANT® contraceptive's common side-effects. Although most side-effects of NORPLANT® contraceptive are not serious, it is very important that clients know of possible side-effects in order to be prepared for them and know how to deal with the situations if they arise. Experience shows that providing such information increases the length of NORPLANT® contraceptive use as well as acceptability of the method.

Table 3.2: Percentage of NORPLANT® Contraceptive Acceptors Having Knowledge of Particular Side-effects

Common Side-effects	West Sumatra	West Java
No knowledge	69.6	74.5
Knows at least one common side-effects	30.4	25.5
<u>Knows particular side-effect*</u>		
No menses at all for a while	13.1	24.0
Scanty menses	16.7	21.7
Spotting between periods	14.2	10.5
Prolonged menses	18.5	22.9
Heavier menses than normal	13.4	8.5
Number of respondents	1,287	1,820

Note: * Each category is treated as a dichotomous variable.

Less than one-third of the acceptors knew at least one common side-effect of NORPLANT® contraceptive. The most commonly reported side-effect is a change in the menstrual bleeding pattern which may include: no menses at all (amenorrhea); scanty menses; spotting between periods; and prolonged or heavier bleeding. The percentages of acceptors who knew any of these side effects ranges between 13 to 19 percent in West Sumatra and from nine to 23 percent in West Java (Table 3.2).

Table 3.3 shows that in West Sumatra the majority of NORPLANT® contraceptive acceptors received information on NORPLANT® contraceptive through community volunteers followed by field workers. One in three respondents in West Java also received information through field workers. Since community volunteers and field workers did not receive training on NORPLANT® contraceptive (see Chapter 4), it is unlikely that acceptors are receiving accurate and balanced information from these sources.

Compared to midwives and doctors, the informal communication channels of friends (other NORPLANT® contraceptive users), relatives, and neighbors play an important role in providing information, but these informal channels often provide inaccurate information. Small percentages of midwives (between 7 and 13 percent) and doctors (2 to 3 percent), who are better trained and capable of imparting accurate information, are providing information to NORPLANT® contraceptive acceptors. The formal communication channels, such as television, radio, and newspaper play an almost insignificant role in imparting information to NORPLANT® contraceptive clients.

Table 3.3: Percentage of NORPLANT® Acceptors by Sources of Information Received on NORPLANT®

Source of Information	West Sumatra	West Java
Television	1.6	1.3
Radio	1.8	1.6
Other NORPLANT® acceptors	11.8	9.4
Relatives/Neighbors	9.6	19.3
PLKB	29.5	36.5
PPKBD	71.0	23.5
Midwife	13.4	7.5
Doctor	1.6	2.9
Newspaper	0.3	0.9
Number of respondents	1,287	1,820

Note: Each category is treated as a dichotomous variable.

Although community volunteers and field workers were main sources of information, acceptor use of NORPLANT® contraceptive was not greatly affected or influenced by these sources. Table 3.4 shows that the majority of acceptors chose NORPLANT® contraceptive because it is long-lasting and convenient. Only 30 percent of acceptors in West Sumatra chose NORPLANT® contraceptive because it was advised by health workers while in West Java this figure is much smaller (six percent).

Table 3.4: Percentage of NORPLANT® Contraceptive Acceptors by Reasons for Choosing the Implants

Reasons for Choosing	West Sumatra	West Java
Advised by Health worker advised	29.5	6.0
Advised by Community official/ others	8.3	8.5
Advised by Friend/relatives	10.7	11.6
Effective against pregnancy	11.0	19.5
Safe, a few side-effects	25.6	15.9
Long lasting/ convenient	52.9	67.6
No need to touch or examine private parts	3.7	4.2
Number of respondents	1,287	1,820

Note: Each category is treated as a dichotomous variable.

3.2 Counseling and Screening

A provider-dependent method, such as NORPLANT® contraceptive, requires good counseling to ensure user satisfaction. In Indonesia, most women who come to clinics for NORPLANT® contraceptive have received information from their village friends, relatives, neighbors, or community volunteers. For this reason, it is important that health workers provide potential clients with accurate and balanced information.

This study gathered information concerning the extent to which health workers imparted accurate and thorough information to women by asking respondents whether they knew about implants and had seen, been shown implants or pictures of implants or knew what implants looked like before insertion and whether they had discussed the subject of implants with a field or health worker before insertion. One limitation of this type of study is that respondents are asked to recall an event which happened some time in the past. Therefore, information needs to be carefully interpreted.

Table 3.5 indicates that the percentage of acceptors who knew of NORPLANT® contraceptive before insertion was 71 percent in West Sumatra and 59 percent in West Java. But only one out of three women in West Sumatra and two out of five women in West Java admitted having seen or knew what the implant looked like before insertion.

Table 3.5: Percentage of NORPLANT® Implant Acceptors who Discussed NORPLANT® Contraceptive with the Health Worker, Had Seen or Knew What the Implant Looked Like, Had Medical History and Physical Examination Before Insertion

Variables	West Sumatra	West Java
Knew of NORPLANT® before insertion	70.9	58.6
Health Worker discussed before the insertion day	56.3	38.0
Discussed before insertion	54.3	47.3
Were Shown NORPLANT® or its picture or knew what it looked like before insertion	36.8	45.4
Asked about their medical history before insertion	52.4	64.0
Given a physical examination before insertion	93.1	64.0
Number of respondents	1,287	1,820

Note: Each category is treated as a dichotomous variable.

Table 3.5 also shows that 52 percent of the acceptors in West Sumatra and 64 percent in West Java had their medical history taken before insertion. There is a slight variation in the proportion of acceptors whose medical history was taken before insertion by type of provider. The last panel of table 3.5 reveals that physical examination before insertion was universally performed in West Sumatra.

In situations where proper screening was not performed, one would expect to find a considerable number of pregnant women with the implant inserted. However, in both West Sumatra and West Java, there were very few cases of pregnant women receiving implant insertions. According to respondents, only ten women in West Java and eight women in West Sumatra were pregnant before insertion. Implants were removed once pregnancies were identified.

In a separate questionnaire, doctors and midwives working in the sampled clinics were asked to explain the procedures they follow when a woman comes in for NORPLANT® contraceptive insertion, and to describe the steps which they follow for screening and counseling before inserting the implants. If a doctor or a midwife did not spontaneously mention a step, the step was read by the interviewer and the respondent was asked if he/she was aware of the step.

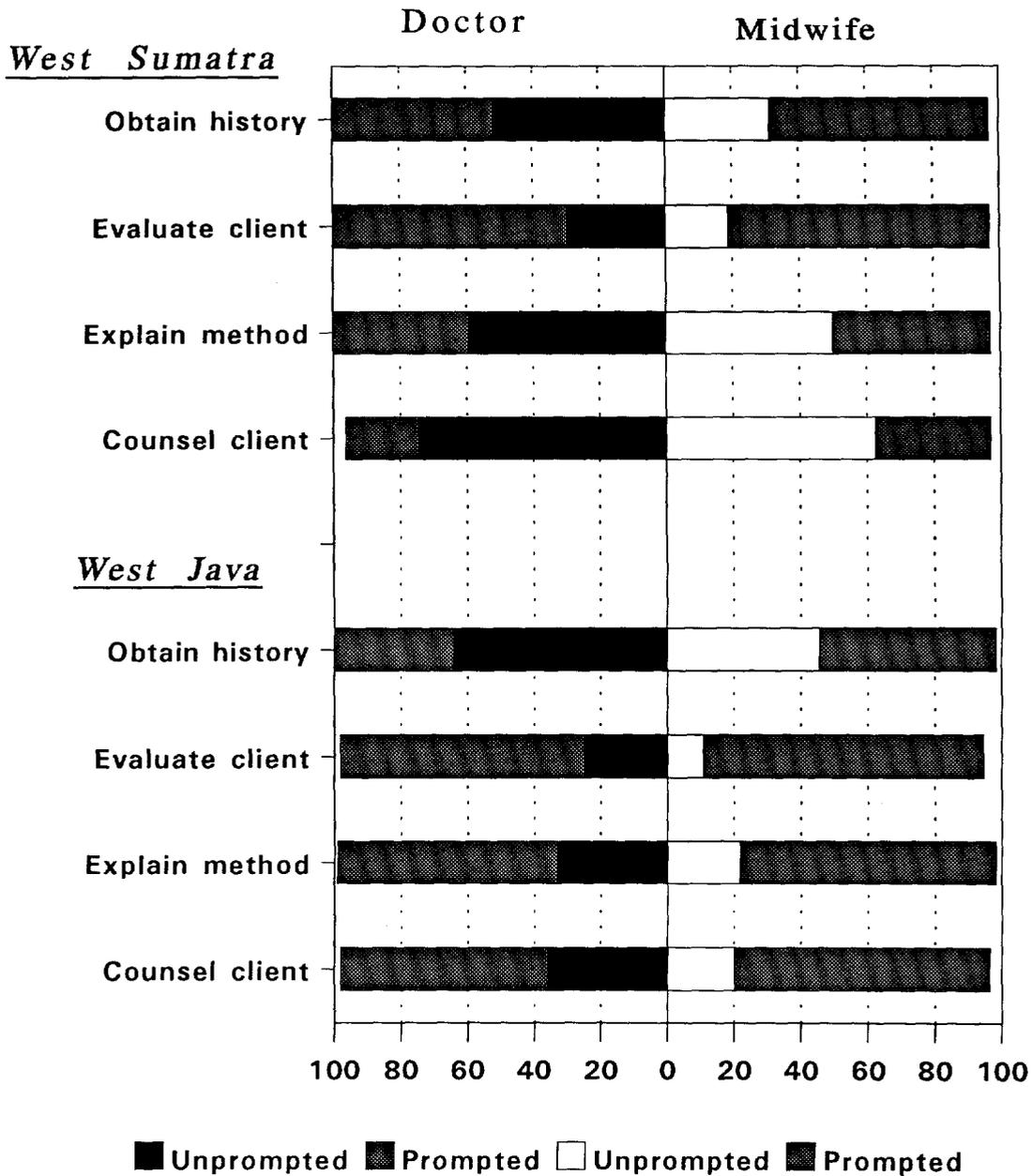
The four steps followed by doctors and midwives in client screening and counseling before insertions are: 1) obtain appropriate history from client; 2) evaluate the client's desire for long or short term contraception; 3) explain the method, using a sample NORPLANT® contraceptive; and 4) counsel the client and what to expect when using NORPLANT® contraceptive. The majority of doctors (eight out of ten) and midwives (nine out of ten) from West Java mentioned that screening and counseling are part of the procedures followed when a woman comes in for NORPLANT® contraceptive (Table 3.6). In West Sumatra, only one out of two doctors and one out of three midwives mentioned screening and counseling as a part of procedures followed. When doctors and midwives were asked to mention specific tasks, data suggests two patterns: more doctors than midwives were able to mention spontaneously all four steps of screening and counseling; and the proportions rose to 100 percent when the interviewer read the steps which were not mentioned spontaneously (Figure 3.1).

Table 3.6: Percentage of Doctors and Midwives Who Mentioned Screening and Counseling Steps (Spontaneous responses)

	West Sumatra		West Java	
	Doctor	Midwife	Doctor	Midwife
<u>Screening & Counseling</u>				
Mentioned	52	31	84	91
Not mentioned	48	69	16	9
Total	100	100	100	100
<u>Steps of Screening & Counseling*</u>				
Obtain history	52	31	64	45
Evaluate clients desire	30	19	25	11
Explain the method	59	50	34	21
Counsel client	74	63	36	20
Number of respondents	27	32	56	57

Note: Each category is treated as a dichotomous variable.

Figure 3.1: Percent Providers Mentioning Screening and Counseling Procedures



Of the steps involved in screening & counseling, in West Sumatra, the highest proportion of doctors or midwives mentioned performing client counseling followed by explaining the method, obtaining client history, and evaluating client's desire for long or short term contraception (Table 3.6). In West Java, obtaining client history is the step most frequently mentioned while evaluating client's desire for long or short term contraception is least mentioned.

Pre-insertion examination of new acceptors is an activity more frequently mentioned by doctors and midwives in West Java than by their counterparts from West Sumatra (Table 3.7). Approximately seven out of ten doctors and midwives in both West Sumatra and West Java reported that they performed a complete physical examination on all new acceptors. Using the medical history form, identifying risk factors, and obtaining a client's complete address are pre-insertion steps least mentioned by providers in both West Sumatra and West Java. The proportion of providers who obtained clients' addresses ranges from three percent to 20 percent while use of medical history forms varies from 11 percent to 35 percent. In addition, ruling out contraindication ranges from 30 percent to 50 percent, identifying risk factors from 22 percent to 44 percent, ruling out pregnancy from 22 percent to 41 percent, and overseeing equipment sterilization procedures from zero to 24 percent.

Table 3.7: Percentage of Doctors and Midwives Who Mentioned Pre-insertion Steps Taken (Spontaneous responses)

Pre-insertion	West Sumatra		West Java	
	Doctor	Midwife	Doctor	Midwife
Mentioned	67	59	84	91
Not mentioned	33	41	16	9
Total	100	100	100	100
<u>Pre-insertion Steps mentioned*</u>				
Obtain client address	11	3	20	20
Use of medical history	11	13	21	35
Rule out contraindication	30	38	50	36
Identification of risk factors	30	44	25	22
Perform a complete physical examination	67	69	71	73
Rule out pregnancy	41	22	36	33
Number of respondents	27	32	56	57

Note: Each category is treated as a dichotomous variable.

3.3 Complications

Two types of complications were reported by the respondents: problems at the insertion site and side-effects due to the use of NORPLANT® contraceptive. Problems at the insertion site include infection, pain, itching, and numbness. Side-effects include disturbances in menstrual bleeding pattern and other medical effects.

3.3.1 Complications at Insertion Site

Table 3.8 reveals that the majority of the NORPLANT® contraceptive acceptors did not have complications at the insertion site. The proportions vary between the provinces. The complaint rate is slightly higher in West Java (34 percent) than in West Sumatra (23 percent).

Table 3.8: Percentage of NORPLANT® Contraceptive Acceptors Having Problems in the Arm Since Insertion

Problem	West Sumatra	West Java
None	76.8	66.0
Infection	2.5	4.9
Pain	8.8	9.7
Itching	9.3	9.4
Numbness	8.2	14.5
Number of respondents	1,287	1,820

Note: Each category is treated as a dichotomous variable.

The proportion of respondents who reported having infection at the insertion site is five percent in West Java and less than three percent in West Sumatra. Reported problems at the site of implant placement were much less during the clinical trials (between 0 and 1.6 per 100 women)⁷ than were reported during this survey. The increase infection rate can be attributed to the less frequent adherence to the proper aseptic conditions. Infection is defined as having pus or bleeding at the insertion site. Other reported complaints are pain, itching, and numbness at the insertion site. In West Sumatra, less than one in ten acceptors reported these problems while in West Java less than ten percent reported having pain and itching while approximately 15 percent reported having numbness at the insertion site.

⁷ The Population Council (1990), "Norplant®- Levonorgestrel Implants: A summary of Scientific Data", New York.

Among current users, about one-fourth of the total respondents in West Sumatra and one-third in West Java reported having complications within one week of insertion (no table). Respondents having such problems within the first month rise to 46 percent in West Sumatra and 70 percent in West Java. Approximately one-fourth of respondents in both provinces were not able to recall when these problems occurred.

The prevalence of reported infection and other complications at the insertion site vary significantly according to current use status of the acceptors. Proportions of the acceptors with complaints and infection are highest among those who discontinued NORPLANT® before five years. The infection and complaint rates are lowest among those acceptors who used NORPLANT® contraceptive for the entire five years.

In West Sumatra, the rate of complaint is lowest for those who had implants inserted at a private clinic or hospital by doctors and for those who had a physical examination performed before insertion. In West Java, acceptors who had the implants inserted at a public hospital and had no medical history recorded or no physical examination performed before insertion are more likely to report complications at the insertion site. Complication rates do not vary according to whether acceptors received service at Safari or on their own. On the contrary, infection rate is found to be lower among those who received the implant services during Safari.

3.3.2 Side-Effects

More than one in every two respondents reported having experienced a change in their menstrual pattern (Table 3.9). The incidence of menstrual disturbance is more common in West Java than in West Sumatra. Between 10 percent and 14 percent of respondents from West Sumatra reported amenorrhea, scanty period, spotting between periods, prolonged bleeding, or longer and heavier bleeding than normal. The proportions of the respondents having these side effects are higher in West Java compared to those in West Sumatra, with the exception of spotting between periods and prolonged bleeding.

Table 3.9 also shows that 21 percent of the respondents in West Sumatra and 15 percent in West Java reported other adverse side-effects, such as headache, nausea or other hormonal effects, and 11 percent and three percent respectively with heart related symptoms.

Table 3.9: Percentage of NORPLANT® Contraceptive Acceptors Having Side-Effects

Side Effect	West Sumatra	West Java
<u>Menstrual Cycle</u>		
None	43.6	31.1
Amenorrhea	12.2	23.8
Scanty periods	13.4	21.4
Spotting	13.4	9.9
Prolonged bleeding	9.6	7.6
Longer/ heavier bleeding	13.7	15.8
<u>Other medical</u>		
Headache, nausea, and other hormonal	20.5	15.4
Heart related	11.0	2.7
Possibly related to NORPLANT®	4.1	2.7
Number of respondents	1,287	1,820

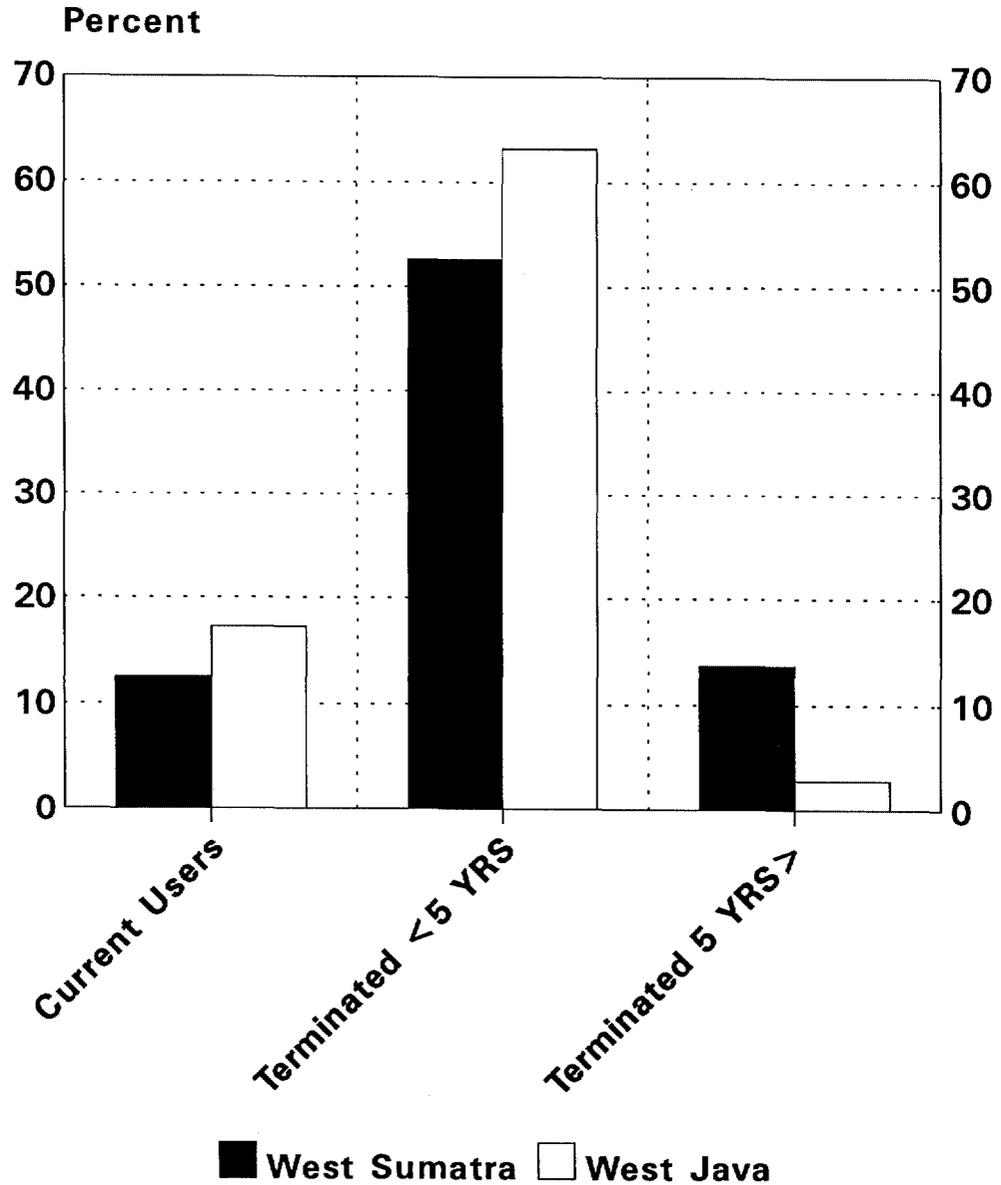
Note: Each category is treated as a dichotomous variable.

Table 3.10: Cumulative Discontinuation Rate Due to Adverse Side-Effects: Gross Rates

Year	Causes		
	Menstrual	Other medical	Non-medical
<u>West Sumatra</u>			
1	1.0	2.0	1.4
2	2.8	3.8	2.4
3	3.8	5.5	3.9
4	4.6	7.4	5.2
5	5.6	8.3	8.8
<u>West Java</u>			
1	0.7	1.7	1.1
2	2.0	2.9	2.0
3	4.0	4.6	3.4
4	6.7	6.2	5.2
5	7.3	8.8	12.8

Aside from the disruption of the menstrual cycle with implant use, other medical problems are mentioned as reasons for discontinuing implant use. In fact, the rate of discontinuation due to other medical reasons is consistently higher compared to those discontinuing due to menstrual changes (Table 3.10).

Figure 3.2: Percent Acceptors Perceiving Side Effects as Inconvenient



Among 'other' reasons, fear of side-effects is also a contributing factor for discontinuing implant use. About five percent in West Sumatra and two percent in West Java discontinued because of this reason (no table).

Acceptors who discontinued implant use before the fifth year are more likely to perceive that side-effects are inconvenient compared to those who are currently using and those who discontinued use after five years (Figure 3.2).

3.4 Removal Services

As reported earlier in Chapter 2, 23 percent and 17 percent of the NORPLANT® contraceptive acceptors had discontinued implant use in West Sumatra and West Java respectively at the time of this survey. This, in fact, suggests that the removal of implants is taking place in Indonesia.

Table 3.11: Percentage of NORPLANT® Contraceptive Terminators by Type of Person Contacted Before Removal

Person contacted	West Sumatra	West Java
None	42.5	48.7
Friend or neighbors	11.1	18.3
Other Implant users	8.3	11.1
PLKB	12.1	8.5
PPKBD	30.7	3.9
Midwife	18.8	8.2
Doctor	8.0	2.0
Clinic/hospital	5.4	2.9
Number of respondents	313	306

Note: Each category is treated as a dichotomous variable.

More than one half of the acceptors who terminated implant use had consulted either friends, neighbors, other implant users, or health workers before discontinuing use. In West Sumatra, Table 5.11 shows that of those who consulted someone before removal, almost one in three contacted PPKBD.

In addition, 19 percent contacted midwives, 12 percent PLKB, 11 percent friends or neighbors, eight percent other implant users, and eight percent doctors before removing the implants. Although acceptors in West Java did not seek consultation as frequently as in West Sumatra, those who did seek consultation before removal most often contacted friends or neighbors or other implant users.

Table 3.12: Percentage of NORPLANT® Contraceptive Terminators Who Discontinued Use Before the Fifth Year by Various Variables

	West Sumatra	West Java
<u>Request for removal</u>		
From acceptors	94.1	90.5
Based on health worker advise	5.9	7.4
Don't remember	0	2.1
Total	100.0	100.0
Number of respondents	205	189
<u>Request met on the same day</u>		
No	60.0	59.8
Yes	38.0	37.0
Don't remember	2.0	7.2
Total	100.0	100.0
Number of respondents	205	189
<u>Reasons for not getting removal service on the same day*</u>		
No service available	10.5	22.0
Persuaded to continue	41.4	27.3
Not remove but given medicine	38.2	35.1
Refused (reasons not relevant)	10.5	13.1
Number of respondents	123	114
<u>Time between first request & implant removed</u>		
One week or less	55.5	60.0
Between one and 4 weeks	25.1	20.5
More than 4 weeks	14.7	13.3
Don't know	4.7	6.2
Total	100.0	100.0
Number of respondents	211	195

Note: * Each category is treated as a dichotomous variable.

Nine out of ten implant acceptors who discontinued the implant before five years both in West Sumatra and West Java requested removal on their own, without being advised by health workers (Table 3.12). Of those acceptors who had their implants removed, six out of ten revealed that their request for removal was not met on the same day for multiple reasons. Among those whose implants were not removed on the same day, about 10 percent in West Sumatra and 22 percent in West Java reported a lack of removal services. Demand for removal of implants was refused to 11 percent in West Sumatra and 13 percent in West Java on the ground that their

reasons were not relevant to NORPLANT® contraceptive use. More than one third were given medicine and requested to continue use instead of removing the implants. Forty-one percent in West Sumatra and 27 percent in West Java were counseled and persuaded to continue use of the implants.

In both West Sumatra and West Java, two out of five acceptors who discontinued implant use before five years received removal service upon one request. A large majority had their implant removed within a month of the day of their first request for removal (last panel of Table 3.12).

Between 50 percent and 69 percent of acceptors who are no longer using the implant had their implant removed after a single request. Only one percent of respondents in West Java and seven percent in West Sumatra had to request implant removal five or more times. On the average, acceptors from West Sumatra had to request 3.3 times for removal while acceptors from West Java had to request only 1.6 times before implants were removed (Table 3.13).

Among current users, about five percent in West Java and eight percent in West Sumatra requested implant removal. On an average, they made approximately two requests. Also, in West Java roughly 14 percent of current NORPLANT® contraceptive users who requested removal were told that removal services were not available. Only four percent of current users requesting removal in West Sumatra were given this reason (Table 3.13). One in two current users in West Java and one in four current users in West Sumatra were persuaded to continue use. The proportion who received medicine instead of removing the implants was 38 percent in West Sumatra and 16 percent in West Java. One out of ten current users also revealed that their request for removal was turned down because their reasons for wanting the implant removed were irrelevant to implant use.

This study has also revealed that the acceptors who wanted to discontinue implant use had to bear a cost for removal. Almost 31 percent in West Sumatra and 61 percent in West Java paid an average of Rupiah 9,000 for removal. Approximately one in four women who had their implants removed paid less than Rupiah 5,000 while the majority (two out of three) paid between Rupiah 5,000 and Rupiah 20,000. Only six percent in West Sumatra paid more than Rupiah 20,000 for removal while in West Java nearly 10 percent paid more than Rupiah 20,000. In West Sumatra, acceptors paid as low as Rupiah 300 and as high as Rupiah 81,600 for removal while in West Java, the range was between Rupiah 1,000 and Rupiah 60,000.

Table 3.13: Percentage Distribution of NORPLANT® Contraceptive Acceptors Requesting Removal

	West Sumatra Current Users	Sumatra Terminate Before the 5th year	West Java Current Users	Java Terminate Before the 5th year
<u>Requested removal</u>				
No	91.6	58.3	94.9	57.9
Yes	8.4	37.0	5.1	35.9
Don't know	0.0	4.7	0.0	6.2
Total	100.0	100.0	100.0	100.0
Number of respondent	995	211	1520	194
<u>Number of times requested for removal</u>				
One	43.2	50.2	58.9	68.8
Two	25.9	18.0	24.7	15.4
Three	19.8	16.1	15.1	11.3
Four	1.2	7.1	0.0	3.6
Five or more	0.0	6.6	0.0	1.0
Not ascertained	9.9	1.8	1.4	0.0
Total	100.0	100.0	100.0	100.0
Number of respondent	81	211	73	193
Mean	1.8	3.3	1.6	1.6
<u>Reasons for not removal</u>				
No service	3.7		13.7	
Persuaded to continue	25.9		48.0	
Not remove but given medicine	38.3		16.4	
Refused (reasons not relevant)	12.3		11.0	
Others	3.7		2.7	
Not ascertained	16.1		8.2	
Total	100.0		100.0	
Number of respondents	73		81	

3.5. Support for NORPLANT® Implant Services

In order to obtain an overview of the adequacy of available services, providers (doctors and midwives) of all sampled clinics were asked a set of questions regarding availability of space to carry out different activities at their clinics; equipment used during insertions and removal of implants; procedures to maintain aseptic conditions; and support activities, such as information, education and communication materials and the recording and reporting system.

3.5.1 Physical Facilities and Equipment

In West Sumatra, one in three doctors and midwives perceive that they have ample space: to welcome the clients; counsel; perform physical examinations; and store instruments. Only about half reported having an area for post-procedure activities in their clinics. It should be noted that having an area for the particular function does not necessarily refer to having a separate room within the clinic but merely a space available to carry out the activity. Most often an area is used for more than one function. While less than half perceive that suitable washing facilities and toilet are available for clients, more than half reported having water and light sources at their clinics.

The facilities at the West Java clinics are less adequate, as perceived by providers. Only four percent of doctors and midwives feel that they have a scrub area. In addition, only 18 percent to 30 percent of doctors and midwives responded that adequate space for counseling and physical examination is available. More than two out of three doctors and midwives in West Java perceive that their clinics do not have adequate facilities for insertions and removals, while only one out of three in West Sumatra admit this situation.

According to doctors and midwives who were interviewed, equipment required for insertions and removals, with the exception of examination tables, have been in use. The providers in West Java tend to use an examination table more often than those in West Sumatra. Soap and epinephrine (optional item) are two items that are used less often by the providers in West Java compared to those in West Sumatra.

Half of the providers from West Sumatra responded that they have the required equipment for insertions and removals at their clinics while only one in three doctors and one in two midwives in West Java responded that they had adequate equipment.

Despite the fact that there is limited space and equipment available at clinics to provide insertions and removals, doctors and midwives from both provinces, nonetheless, have been performing these procedures. On the average, doctors in West Java have inserted implants to 75 women and midwives have inserted more than 175.

Although the average number of insertions is much lower in West Sumatra compared to West Java, midwives have inserted more implants than the doctors.

In comparison with the number of insertions, there are far fewer removals taking place in both provinces. On the average, 25 to 38 women have had implants removed in West Java and the figure is only less than 15 women in West Sumatra. Again, more removals are performed by midwives than doctors.

3.5.2 Aseptic Practices

Information on aseptic practices was obtained by asking each provider questions regarding their aseptic procedures. Iodine preparations or Betadine and alcohols are the most common antiseptics used in West Java. One in two doctors or midwives are using either iodine preparations or alcohol. In West Sumatra, one in three providers are using alcohol as an antiseptic. Alcohols are effective against microorganisms but not against tetanus spores.

A large majority of the providers in West Sumatra and in West Java are using disposable needles and syringes which must be discarded after a single use (Table 3.14). As they are made with plastic parts, they cannot be sterilized in an autoclave or boiled. According to this study, a small proportion of providers from West Sumatra (between one in ten doctors and one in five midwives) and from West Java (one in ten providers of both types) are not aware of the fact that the needles and syringes could not be sterilized.

A small proportion of the providers reported sterilizing instruments, linens and gloves by autoclaving. A majority practiced steam/ boiling sterilization. Of those who use this procedure to sterilize, only between 19 percent and 26 percent boiled for a minimum of 20 minutes at 100 degrees celsius. As the World Health Organization recommends that pressure-cooker type sterilizers should be operated at 121 degrees celsius for a minimum exposure time of 20 minutes, much of the sterilization taking place in the sampled clinics is insufficient.

The trocar, which is essential to the insertion procedure, must also be given proper care. As repeated use will cause it to become blunt, routine examination and sharpening after every ten insertions and replacement after 100 insertions are recommended. The data show that four out of five doctors and midwives in West Sumatra examined the trocar after every ten insertions or even before the tenth insertion. Doctors and midwives in West Java examined the trocar less often than their West Sumatran colleagues. Doctors in West Java are also less likely to check the trocar as often as midwives. Between 11 percent and 19 percent of the providers examine the trocar only after 20 insertions.

Table 3.14: Percent Distribution of Providers Following the Aseptic Procedures

Function	West Sumatra		West Java	
	Doctor	Midwife	Doctor	Midwife
<u>Types of Antiseptics</u>				
Iodine preparations	22	25	54	44
Alcohol	63	63	43	50
Others	15	12	2	6
Not stated	0	0	2	0
Total	100	100	100	100
<u>Types of Syringes and Needles</u>				
Disposable	93	94	96	96
Non-disposable	7	6	4	4
Total	100	100	100	100
<u>Disposable Syringes and Needles after first use</u>				
Use directly for next one	7	9	2	11
Sterilized first and use	11	22	11	9
Discard	78	63	84	78
Don't know	4	6	4	2
Total	100	100	100	100
<u>Examine trocar after</u>				
10 or less uses	85	81	60	67
More than 10 time uses	15	19	11	17
Don't know	0	0	29	17
Total	100	100	100	100
<u>Blunt trocar</u>				
Sharpen it before use	44	13	54	63
Use it without sharpening	19	28	11	9
Discard	11	19	4	6
Don't know	26	41	32	22
Total	100	100	100	100
<u>Time to replace trocar</u>				
Less than 10 uses	81	84	70	70
10 or more times uses	19	16	4	4
Don't know	0	0	27	26
Total	100	100	100	100
<u>Method of Sterilization</u>				
None	0	0	5	0
Steam/boiling	78	72	93	98
Autoclaving	15	9	2	2
Others	7	19	0	0
Total	100	100	100	100
<u>Duration of Sterilizing</u>				
Less than 20 minutes	74	81	75	75
20 minutes or more	26	19	23	23
Don't know	0	0	2	2
Total	100	100	100	100
Number of respondents	27	32	56	57

Note: Total may not add up to 100 percent because of rounding.

More than half of the providers, both doctors and midwives, in West Java reported that the trocar was sharpened after it became blunt while one in ten used it again without sharpening. The proportion of providers in West Sumatra who sharpened the trocar is less than their counterparts in West Java. Between 19 percent and 28 percent of the providers in West Sumatra do not sharpen the trocar before the next insertion. One in three doctors in West Java and one in four doctors in West Sumatra did not know what to do with the trocar if it became blunt. As many as two out of five midwives in West Sumatra did not know what to do with a blunt trocar. Finally, approximately two out of three providers in both West Java and West Sumatra have been replacing the trocar after performing fewer than 10 NORPLANT® contraceptive insertions.

3.5.3 Follow-up

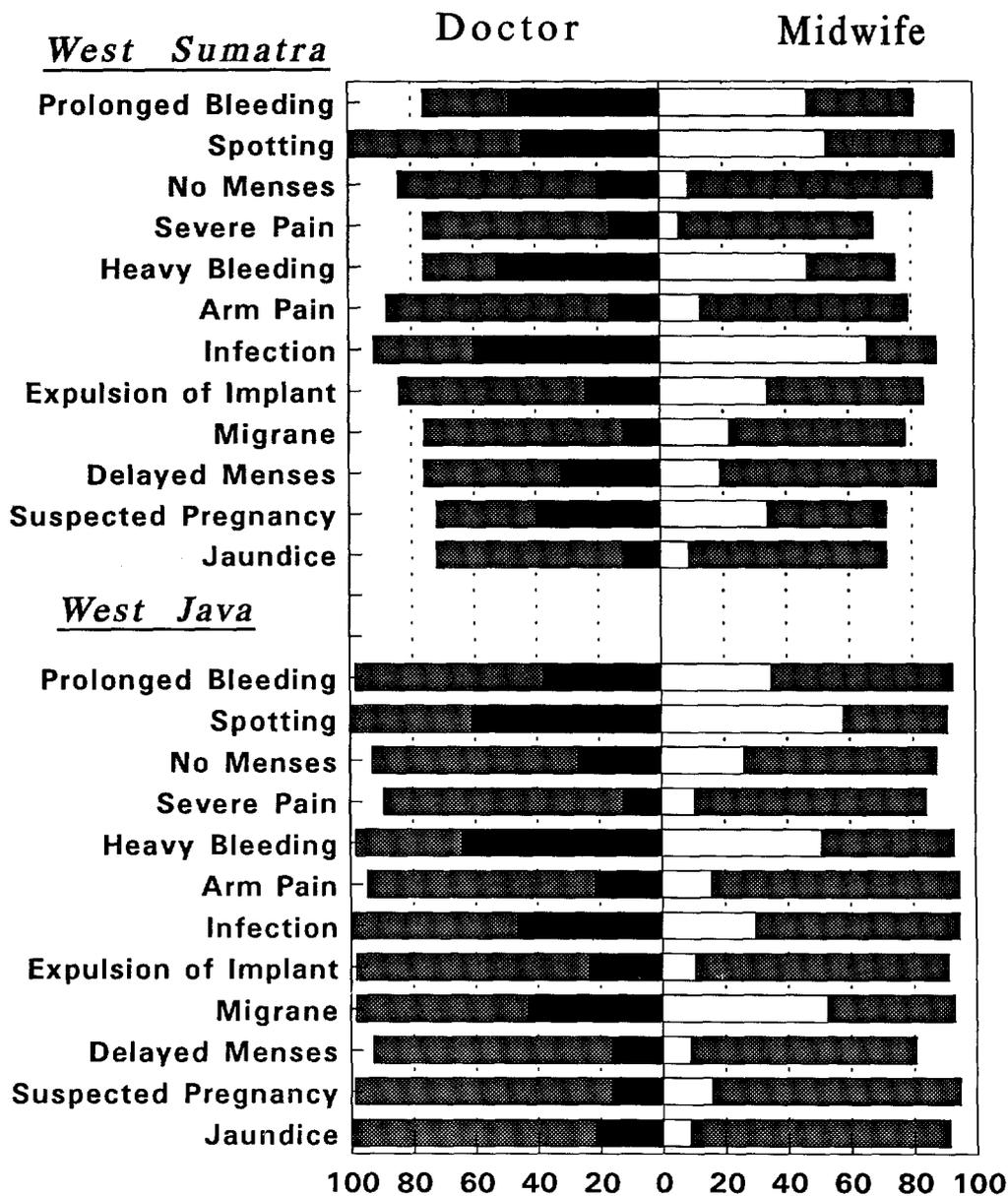
The NORPLANT® contraceptive user should be encouraged to return to the clinic after insertion for a number of reasons: if she experiences heavy bleeding; for periodic health check-ups; if she experiences any of the problems listed under warning signs; if she has any problems with the method that worry her; if she wants to have a child; and if she is moving away from the area and needs the address of a clinic in her area that provides NORPLANT® contraceptive services.

It is the responsibility of the provider to encourage the client to return to the clinic. Three out of four providers in West Java do encourage their clients to return for follow-up visits. On the contrary, only eight percent of doctors and 32 percent of midwives in West Sumatra encourage clients to return to the clinic.

The data presented in Figure 3.3 shows that not all providers encourage a client to return to the clinic if she is experiencing side-effects. Information on whether the providers encouraged the clients to return to the clinic was collected by asking, "Did you also tell NORPLANT® contraceptive acceptors to come back if they are experiencing side-effects which can be bothersome or distressing?"

Providers were asked to mention side-effects for which they ask clients to come back for a follow-up visit. If a side-effect was not mentioned spontaneously, the interviewer then read the side-effect and asked whether the provider asks the client to return to the clinic if she is experiencing that particular side-effect. Even when prompted, the West Sumatra providers did not respond that they encouraged the clients to return to the clinic (Figure 3.3).

Figure 3.3: Percent Providers Encouraged Return Visit



Unprompted
 Prompted
 Unprompted
 Prompted

Even though a large majority of the providers in West Java asked their clients to return to the clinic, one in three doctors and one in ten midwives reported that no clients returned to the clinic with bleeding problems during the three months prior to the survey. More doctors and midwives in West Sumatra than in West Java reported that no clients returned. In West Java, eight clients returned to the clinic more than 25 times with bleeding complaints within the three months prior to the survey according to midwives and four women returned 20 times (no table). The frequency of returning clients with bleeding complaints, as reported by doctors and midwives, was lower in West Sumatra than in West Java.

3.5.4 Information, Education and Communication (IE & C)

According to the providers interviewed in this study, very few NORPLANT® contraceptive IE & C materials are available at their clinics. More than two-thirds of the providers in both provinces revealed that they do not give away any IE & C materials to their clients (Table 3.15). The small proportion who distribute materials provide their clients with leaflets. The NORPLANT® contraceptive related IE & C materials are virtually non-existent in West Java although some providers responded that some materials are available for clients.

A large majority of providers, field workers, and community volunteers thought that there should be more IE & C materials available for themselves and their clients.

Table 3.15: Percent of Providers Reporting Availability of IE & C Materials

	West Sumatra		West Java	
	Doctor	Midwife	Doctor	Midwife
<u>NORPLANT® IE & C materials*</u>				
Flipchart	24	22	4	4
Brochure/leaflet	28	16	0	2
Booklet	44	50	0	2
Poster	32	34	18	15
<u>Any NORPLANT® materials available for clients</u>				
None	72	81	75	65
Yes	28	19	25	35
Total	100	100	100	100
Number of respondents	27	32	56	57

Note: * Each category is treated as a dichotomous variable.

3.5.5 Record Keeping

The K-IV form, which is used to record client information, contains very useful information, such as client medical history, result of physical examinations, contraindications, date of insertion, and results of return visits. If properly filled out, it can serve as a good record for follow-ups and to trace the date of removal. All sampled clinics have maintained records properly. In addition to this record card, the clinics also maintain a register book with names and addresses of clients.

At the time of the implant insertion, clients are also given an acceptor card which contains the date of insertion and the date of removal. When acceptors were requested to produce their acceptor card during the survey, more than half could produce the card their provider had given them.

Almost all providers and field workers responded that the K-IV form contained sufficient information for knowing conditions of clients, tracing whereabouts of clients, and for providing the date of implant removal.

4. QUALITY OF CARE AND CLIENT SATISFACTION

This chapter addresses quality of care issues, such as choice of methods, information given, technical competence and interpersonal relations, as they pertain to NORPLANT® contraceptive service delivery.

4.1 Choice of Methods Provided

The addition of NORPLANT® contraceptive in the national program has broadened the range of contraceptive choice available to Indonesian couples, attracting new acceptors and also increasing the opportunity for previous family planning acceptors to switch methods. The proportion of NORPLANT® contraceptive acceptors who switched from other methods accounts for between 64 percent in West Sumatra and 83 percent in West Java (see Table 2.3). The proportion of acceptors who discontinued NORPLANT® contraceptive and adopted another method ranges from 27 percent to 32 percent in West Sumatra and 47 percent to 52 percent in West Java (Table 4.1).

Table 4.1: Percentage Distribution of NORPLANT® Contraceptive Terminators by Whether They Used Another Method

Use of another method	West Sumatra		West Java	
	Terminate before 5 years	Terminate after 5 years	Terminate before 5 years	Terminate after 5 years
Yes	27	32	47	52
No	73	68	53	48
Total	100	100	100	100
Number of respondents	205	81	189	111

A factor involved in switching methods could be the role played by providers, particularly field workers and community volunteers in choosing a method for their client, although increasingly fewer numbers of providers, field workers, and community volunteers now consider this their role.

Although an overwhelming majority of acceptors in both provinces indicated that they are satisfied with NORPLANT® contraceptive, acceptors who have discontinued implant use before the fifth year are more likely to reveal their dissatisfaction with the NORPLANT® contraceptive use than those who are currently

using and those who discontinued use after the fifth year (Table 4.2). At the same time, more current users and those who used the method for the entire five years are also more likely to recommend NORPLANT® contraceptive than women who discontinued use before the fifth year. The respondents indicate that NORPLANT® contraceptive is the preferred method among current users and those who discontinued use after the fifth year.

Approximately one out of three NORPLANT® contraceptive acceptors revealed that they will not recommend NORPLANT® contraceptive to others (Table 4.2). This proportion varies according to the acceptors' current use status.

Table 4.2: Percentage Distribution of NORPLANT® Contraceptive Acceptors by Whether They Recommend NORPLANT® Contraceptive to Others and Current Use Status

	Current User	Terminate before 5 years	Terminate after 5 years	All
<u>West Sumatra</u>				
Recommended	66.2	36.5	77.8	62.1
Not recommended	33.8	63.5	22.2	37.9
Total	100.0	100.0	100.0	100.0
Number respondents	995	211	81	1,287
<u>West Java</u>				
Recommended	73.2	42.6	83.8	70.6
Not recommended	26.8	57.4	16.2	29.4
Total	100.0	100.0	100.0	100.0
Number respondents	1,514	195	111	1,820

Of those women in West Sumatra who will not recommend NORPLANT® contraceptive to others, more than one-half of the women who discontinued implant use will not recommend NORPLANT® contraceptive because of 'side-effects' and one in three are 'not sure' why they will not recommend. Among current users, only 23 percent cited 'side-effects' as a reason for not recommending while almost one out of two are 'not sure' and one out of three have 'other' reasons. In West Java, acceptors who indicated they would not recommend NORPLANT® contraceptive gave 'others' reasons.

Approximately 45 percent of current users of NORPLANT® contraceptive revealed that they are not sure if they will have the implants re-inserted while one in four current users will not have the implants re-inserted (Table 4.3). Of those who did not wish to have the implants re-inserted, about one-fourth want to adopt a different contraceptive method.

Table 4.3: Percentage Distribution of NORPLANT® Contraceptive Current Users by Whether Wish to Re-insert the Implants

Whether wish to re-insert the implants	West Sumatra	West Java
Yes	31.6	27.0
No	23.8	27.3
Not sure	44.5	45.6
Not ascertained	0.1	0.0
Total	100.0	100.0
Number of respondents	995	1,514

Note: Total may not add up to 100 percent because of rounding.

The data from this study also shows that choice of contraceptive reflects the level of unmet need. The proportion of acceptors who discontinued implant use, are not currently using another method, and want no more children is as high as 41 percent in West Sumatra and 26 percent in West Java. If those who are not sure about wanting another child are included in the number of women who need protection from becoming pregnant, the unmet need will increase up to 66 percent in West Sumatra and 51 percent in West Java (no table).

Table 4.4: Percentage Distribution of NORPLANT® Contraceptive Acceptors Who Discontinued Use Before the Fifth Year by Method Use Before and After NORPLANT® Contraceptive.

Method Use After NORPLANT®	West Sumatra		West Java	
	Method Use Before Yes	Method Use Before No	Method Use Before Yes	Method Use Before No
Yes	31.0	20.3	50.3	33.3
No	69.0	79.7	49.7	66.7
Total	100.0	100.0	100.0	100.0
Number of respondents	126	79	147	42

Although all current users continued to use NORPLANT® contraceptive for the full five years, there is also a slight possibility that the rate of contraceptive prevalence will be affected by women not using another method after discontinuing use of the implants. Of those who had used a family planning method before adopting NORPLANT® contraceptive and discontinued the implants, one-half do not use any contraceptive in West Java while this figure reaches 69 percent in West Sumatra (Table 4.4).

4.2 Information Given

As discussed in Chapter 3, acceptors generally have limited knowledge concerning basic aspects of the NORPLANT® contraceptive. Potential acceptors often receive information at the community level by PLKB and PPKBD before coming to the clinic, and after deciding to accept a particular method, receive information during a 'group counseling' session. Many providers, field workers, and community volunteers who were interviewed expressed the opinion that group counseling is a good approach for providing information.

The low level of acceptors' knowledge is attributable to the fact that field workers and volunteers have not had adequate training on the NORPLANT® contraceptive and that IEC materials are lacking. Health workers, including doctors and midwives, demand more training in order to be skilled providers and also want more IEC materials for themselves and for their clients.

Table 4.5: Percentage Distribution of NORPLANT® Contraceptive Acceptors by Whether Satisfied with Information Given and Current Use Status

	Current User	Terminate before 5 years	Terminate after 5 years	All
<u>West Sumatra</u>				
Satisfied	64.0	47.8	66.7	61.6
Not satisfied	11.5	17.6	6.2	12.1
Not sure	24.5	34.6	27.2	26.3
Total	100.0	100.0	100.0	100.0
Number of respondents	995	205	81	1,281
<u>West Java</u>				
Satisfied	75.0	63.8	85.6	74.5
Not satisfied	8.9	14.9	5.4	9.3
Not sure	16.1	21.3	9.0	16.2
Total	100.0	100.0	100.0	100.0
Number of respondents	1,514	188	111	1,813

Note: Total may not add up to 100 percent because of rounding.

About two-thirds of the acceptors in West Sumatra and three-fourths in West Java revealed that they were satisfied with the information given to them. The remaining one-third in West Sumatra and one-fourth in West Java either were 'not satisfied' or 'not sure' whether they were satisfied with the information provided. There is a slight variation in the level of satisfaction depending on the current use status (Table 4.5).

Family planning managers and providers strongly believe that a client must obtain accurate information on all aspects of available contraceptives. Some believe that too much information will frighten or be misunderstood by rural, less educated women and discourage acceptance, while others believe that inadequate information, particularly about side-effects, could create harmful rumors, resulting in discontinued use. Almost all providers, field workers, and community volunteers agree that clients should be informed of other methods even if they come in specifically for NORPLANT® contraceptive insertions.

In this study, NORPLANT® contraceptive acceptors who were not satisfied with the information provided to them were asked what information should have been given. In West Sumatra, more than two-fifths want to have information on the availability of removal and one-third on the side-effects of NORPLANT® contraceptive use (Table 4.6). In West Java, a majority (66 percent) desire information on 'side-effects', followed by 36 percent who want to know 'what to do about problems' and 20 percent requiring information about 'availability of removal'. A small proportion of women also indicated that they would like to know how the implants work in preventing pregnancy.

Table 4.6: Percent of NORPLANT® Acceptors Who Are Not Satisfied with Information Provided by Types of Information They Should Have Been Told

Items	West Sumatra	West Java
Side effect or safety	32	66
What to do about problems	20	36
Availability of removal	44	20
Necessity for 5 year removal	10	5
How implants work	7	15
Effectiveness in preventing pregnancy	3	6
Number of respondents	152	169

Note: Each category is treated as a dichotomous variable.

4.3 Technical Competence

While one limitation of this study is that it did not focus on clients' perspectives regarding provider competency to deliver quality services, providers, field workers and community volunteers were asked a series of questions to assess their knowledge of basic facts about NORPLANT® contraceptive.

Most providers and field workers from both provinces knew that NORPLANT® contraceptive has six capsules, is effective for five years, and must be removed after five years of use. All providers, field workers, and community volunteers interviewed knew that a woman can become pregnant once the implants are removed. One in five community volunteers in both provinces were not aware that NORPLANT® contraceptive contains six capsules. With the exception of providers from West Sumatra, not all providers, field workers, and community volunteers knew that NORPLANT® contraceptive can be removed before five years.

A large majority of the providers, field workers, and community volunteers are not aware of the fact that NORPLANT® contraceptive is effective within few hours of insertion. The level of knowledge is much lower in West Sumatra where fewer doctors than midwives and PLKBs knew that NORPLANT® contraceptive is effective within a few hours of insertion.

To be certain that the client is not pregnant, the implants should be inserted within seven days after the onset of menstrual bleeding or immediately post-abortion. Only one out of four doctors and one out of three midwives from West Sumatra knew the exact timing of insertion compared with 60 percent of doctors and 65 percent of midwives in West Java. In general, more providers, field workers, and community volunteers in West Java are aware of proper timing of insertion than those in West Sumatra. Providers in both provinces are more likely to be aware of proper timing than the field workers and community volunteers.

NORPLANT® contraceptive's effectiveness diminishes if it is not stored properly. Most providers from both provinces are not aware that factors such as non-observation of expiry date; excessive heat, water and/ or moisture; direct and intense sunlight; micro-organisms and insects; and shock and stress can damage NORPLANT® contraceptive. Very few doctors also know that NORPLANT® contraceptive has an expiration limit of 5 years.

As expected, more doctors than midwives, field workers, and community volunteers from both provinces understand that NORPLANT® contraceptive releases progestin in continuous low dosages, differentiating it from the oral pill. It should, however, be noted that two out of five doctors from West Sumatra and three out of ten doctors from West Java cannot differentiate NORPLANT® contraceptive from the oral pills in terms of the release of hormones.

Figure 4.1
 Knowledge Regarding Basic Facts
 About Norplant®
 (Percent)

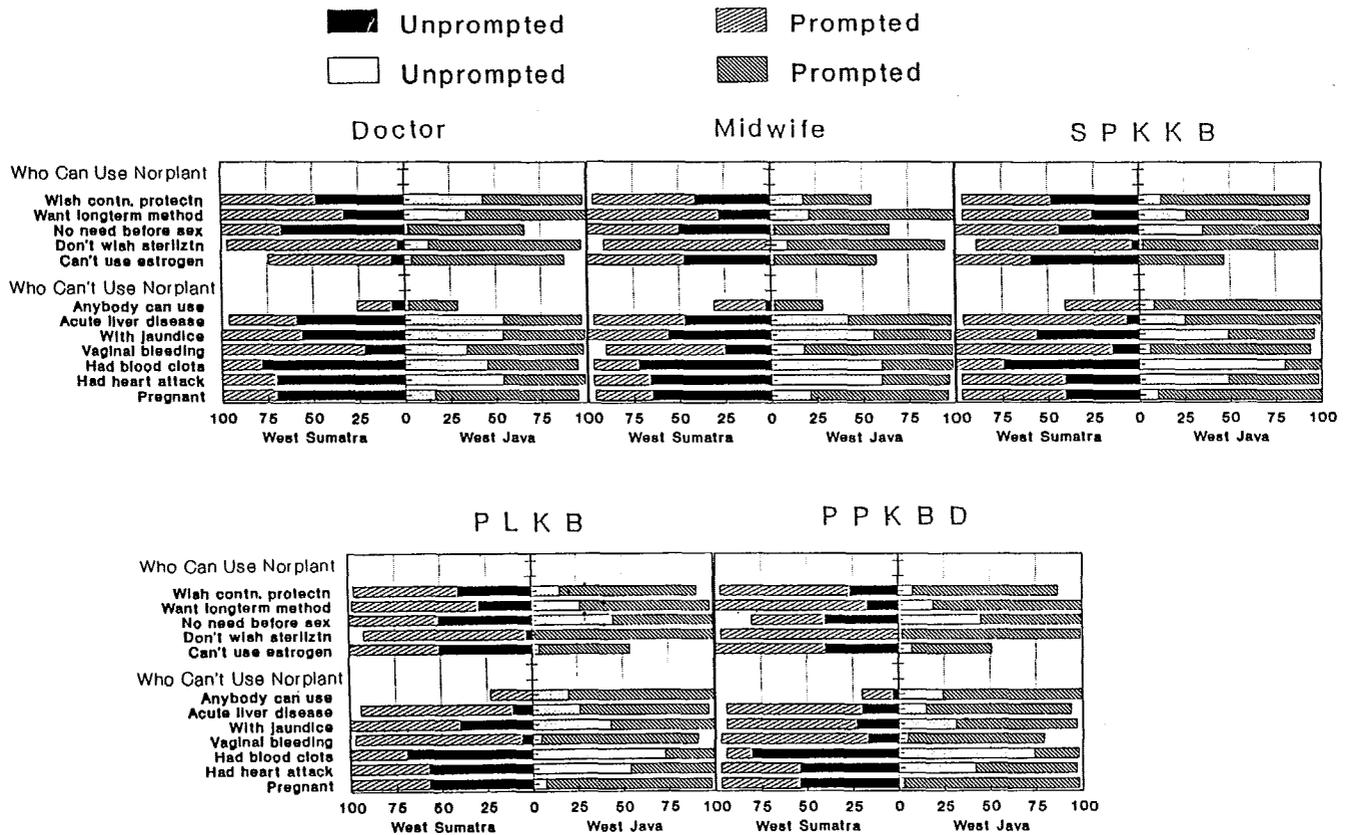


Figure 4.2: Percent Perceived Service Delivery Responsibility

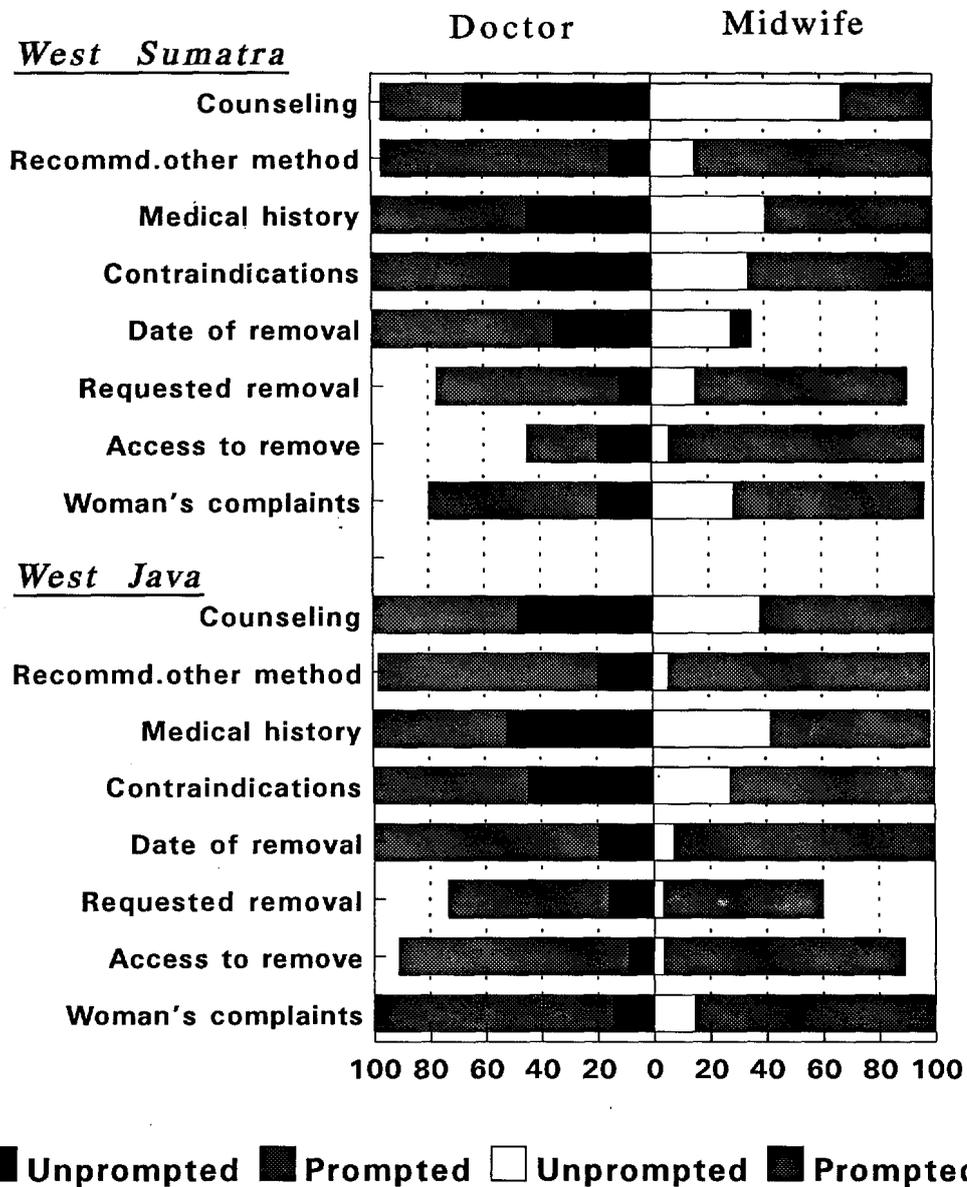


Figure 4.1 clearly shows that providers' knowledge of who may use NORPLANT® contraceptive is, in general, still low, particularly since most providers responded only after the answer was read to them. Responses as to what providers knew regarding which clients should not be using NORPLANT® contraceptive are similar. (Figure 4.1)

Almost all providers, field workers, and community volunteers perceive that change in the menstrual bleeding pattern is the most common side-effect of the implants. But less than three-fourths believe that prolonged menstrual bleeding is a change NORPLANT® contraceptive users might experience during the first month of use. While the majority of providers, field workers, and community volunteers from West Java knew that the use of implants may result in untimely bleeding or spotting between periods, less than one-half do so in West Sumatra.

Providers also believed that they have certain responsibilities towards their clients. Doctors and midwives most often reported that their responsibilities towards clients included counseling, taking medical histories, and screening for contraindications. More doctors and midwives from West Sumatra than from West Java perceive that counseling is their responsibility. In addition, very few doctors and midwives in both provinces believe that ensuring access for removal is their responsibility. Within West Java, more doctors than midwives feel responsible for the various components of the NORPLANT® contraceptive program. Figure 4.2 reveals that nearly all providers only became aware of their responsibilities toward clients after reading about them. (Figure 4.2)

4.4 Interpersonal Relations

Potential NORPLANT® contraceptive clients have usually already contacted either family planning workers or volunteers before coming to the clinic for insertions. Normally, local doctors at the Puskesmas should provide potential clients with information regarding NORPLANT® contraceptive, take a medical history, provide a physical examination, and screen for contraindications. As a result, there is often very little or no verbal interaction between the implant provider (doctor or midwife) and the client.

An overwhelming majority of NORPLANT® contraceptive acceptors did not have complaints regarding the services they received. On the average, more than 90 percent of NORPLANT® contraceptive acceptors was satisfied with services they received (Table 4.7). In both provinces it was more likely that the acceptors who discontinued use before the fifth year were not satisfied with the services they received than those who are currently using and those who continued through the fifth year.

Table 4.7: Percentage Distribution of NORPLANT® Contraceptive Acceptors by Whether Satisfied with the Services and Current Use Status

	Current User	Terminate before 5 years	Terminate after 5 years	All
<u>West Sumatra</u>				
Satisfied	95.3	76.6	91.4	92.0
Not satisfied	1.4	9.8	3.7	2.9
Not sure	3.3	13.7	4.9	5.1
Total	100.0	100.0	100.0	100.0
Number of respondents	995	205	81	1,281
<u>West Java</u>				
Satisfied	93.6	71.3	94.6	91.3
Not satisfied	1.9	8.5	4.5	2.8
Not sure	4.5	20.2	0.9	5.9
Total	100.0	100.0	100.0	100.0
Number of respondents	1,514	188	111	1,813

Note: Total may not add up to 100 percent because of rounding.

Of the small proportion of acceptors who were not satisfied with the services, more than one-half were not satisfied because of inadequate counseling and information provided in both provinces. In West Sumatra, two out of five acceptors complained that they received "poor personal treatment" while only one in ten complained of "long waiting time" for the service. In West Java, one in five acceptors complained of "clinic too far", "poor personal treatment", and "inadequate facility". Less than ten percent mentioned having no choice for alternative methods.

After inserting the implants, interaction between acceptor and provider occurred only if the client experienced complications. The majority of providers advised the acceptors to return for a check-up should any complications or side-effects arise. The study revealed that among current users of the implants one out of ten in West Sumatra and one out of five in West Java had contact with a health worker, either at a clinic or at home, 12 months prior to the survey. On the average, acceptors and providers met two times within 12 months prior to the survey or since insertion.

5. NORPLANT® ACCEPTOR CONTINUATION AND TERMINATION

This chapter presents continuation rates and net termination rates and discusses various reasons for termination as well as continuation rates for different sub-categories of demographic, social, economic, knowledge variables and family planning and fertility preference. While termination due to various reasons are discussed, rates refer to net rather than gross rates since net rates also take into account other causes of termination which come into play. Continuation and termination rates are derived by using life table techniques.

5.1 Continuation Rates

Continuation rates presented in Table 5.1 are high and comparable to those found during the pre-introductory study, with the exception of rates at 60 months. The five-year rate drops to 55 percent in West Sumatra and 33 percent in West Java. The pre-introductory study five-year continuation rate was 78 percent⁸. Cumulative continuation rates through the 48th month are similar in both provinces, but rates at 54, 60, 66, and 72 months are lower in West Java than in West Sumatra.

Table 5.1: Cumulative Continuation Rates by Year per 100 Acceptors by Province

Ordinal Month(x)	West Sumatra		West Java	
	Nx*	CCRx	Nx*	CCRx
6	1260.0	98.0	1557.5	97.9
12	1199.5	95.8	1370.0	96.5
18	1142.0	94.6	1147.5	94.7
24	1047.0	91.2	902.0	93.2
30	983.5	89.9	700.5	90.4
36	891.5	86.8	600.5	88.4
42	772.5	84.8	393.5	84.7
48	597.0	82.6	348.0	80.8
54	429.0	80.4	158.0	73.9
60	108.5	55.0	81.0	33.0
66	13.0	19.3	18.0	14.4
72	4.0	14.8	16.0	12.7

Notes: Nx* denotes number exposed to risk during the month.
CCRx denotes cumulative proportion surviving at the month.

⁸ The Population Council (1990), NORPLANT® - Levonorgestrel Implants: A Summary of Scientific Data. New York.

The probability of acceptors continuing implant use through 72 months ranges from 0.13 in West Java to 0.15 in West Sumatra. Four out of 1,287 acceptors in West Sumatra and 16 out of 1,820 acceptors in West Java continued beyond six years.

Change in menstrual bleeding pattern and other medical reasons were important causes of discontinuing use of the implants before completion of five years. In both provinces, between three and eight percent discontinued because of infection at insertion site and about three to four percent discontinued because of pregnancy. Twenty-two percent and 14 percent in West Java and West Sumatra respectively discontinued implant use due to personal reasons which included 'fear of side effects', 'no longer needed', and 'others'. About four to six percent discontinued because of 'desire to have a child'.

Table 5.2: Cumulative Net Termination Rates per 100 Acceptors by Year

	Years of use				
	1	2	3	4	5
<u>West Sumatra</u>					
Pregnancy	0.0	0.2	0.4	0.9	2.0
Medical	2.9	6.3	8.9	11.3	13.0
Non-medical	1.4	2.4	3.8	4.9	7.8
5-year removal	0.0	0.0	0.3	0.4	22.3
Total Terminations	4.3	8.9	13.4	17.5	45.1
<u>West Java</u>					
Pregnancy	0.1	0.1	0.3	0.4	0.4
Medical	2.3	4.8	8.1	12.1	14.7
Non-medical	1.1	1.8	3.2	4.8	10.5
5-year removal	0.0	0.1	0.1	1.9	41.4
Total Terminations	3.5	6.8	11.7	19.2	67.0

5.2 Termination Rates

Termination rates are initially higher in West Sumatra than in West Java. The West Sumatran first-year termination rate is four per 100 acceptors, and the rate over five years is 45 per 100 acceptors. Comparable rates are four and 67 per 100 acceptors in West Java (Table 5.2).

In both provinces, the probability of terminating implant use due to medical reasons is much higher than other reasons through the fourth year. As expected, the five-year removal is the major reason for removing the implants in the fifth year. The net cumulative pregnancy rate in West Sumatra is five times higher than in West Java with two out of 100 pregnancies in West Sumatra over the five year period. Differences in pregnancy rates between the two provinces are pronounced at four and five years.

In West Sumatra and West Java, the proportion of acceptors who discontinued NORPLANT® contraceptive because of non-medical reasons constitutes about 11 percent and eight percent at the fifth year respectively. Net termination rates before the fifth year do not vary greatly between the provinces.

5.2.1 Very Early Termination

The issue of very early termination (defined as < 1 year of use) among NORPLANT® contraceptive acceptors has been increasingly raised by program managers as an important concern because of the costs of NORPLANT® contraceptive and the efforts of the BKKBN to carefully target and select acceptors for long term use. If an acceptor had used the NORPLANT® contraceptive for less than one year and requested removal for medical and non-medical reasons, such as one of NORPLANT® contraceptive's complications or side-effects, the majority of providers attempted medication as the first step, followed by counseling, before considering removal. If the reason was the result of rumors, providers tried to give renewed motivation and, in most cases, acceptors continued NORPLANT® contraceptive use.

The data from this study reveals that very early removal of NORPLANT® contraceptive is less than five per 100 acceptors in both provinces. The principal reasons for early termination of implants were medical reasons, including undetected pregnancy before insertions, infections at insertion sites and changes in menstrual bleeding pattern. Fear of side effects constituted the major non-medical reason for early termination. (see table 5.2).

5.2.2 Late Removal

The data presented in Table 5.1 indicates that between the 54th and 66th months, a substantial proportion of acceptors in both West Sumatra and West Java had their implants removed. This suggests that many acceptors are returning for removal at or just before the five year deadline, as they should. Four out of 1,287 acceptors in West Sumatra and 16 out of 1,820 acceptors in West Java did not turn up after 66 months of use for removal. While this proportion is not substantial, the number of acceptors retaining NORPLANT® contraceptive beyond the recommended five-year use period is likely to escalate over time as the number of NORPLANT® contraceptive acceptors increases. Applying the life-table cumulative continuation rates, the estimated number of acceptors needing the five-year removal throughout Indonesia ranges between 48,000 and 80,000 in 1992/93; 69,000 and 114,000 in 1993/94; and 131,000 and 219,000 in 1994/95. The minimum estimate is based on the West Java life-table rates while the maximum is based on the West Sumatra life-table rates. These estimated numbers of acceptors requiring five-year removal assumes that the survival experience follows the same pattern as in the construction of the life-table.

5.3 Differential Continuation Rates

5.3.1 Demographic Characteristics

In West Sumatra, the five-year continuation rates vary according to age of acceptor; number of living children, and age of youngest child at the time of acceptance. Table 5.3 indicates that the percentage of acceptors who continued use through the fifth year tends to be smaller among younger cohorts (15-29 years) than older cohorts (30-49 years). Cumulative continuation rates do not vary by age and number of living children through the third year and differences begin to appear in the fourth and the fifth years. But the most pronounced difference in continuation rates between younger and older groups and number of living children occurs in the fifth year. The cumulative continuation rate in the fifth year is more than double among women with three or more living children (58 percent) compared to women with less than three living children (22 percent). Of all demographic variables considered in this analysis, age of youngest child at the time of insertion appears to be significantly related to continuation rate. Cumulative continuation rate is consistently higher among those acceptors whose youngest child was three years or more at the time of insertion than among those whose youngest child was less than three years. Difference in continuation rates between these two categories is nine percentage points at the first-year and over five years rose to as high as 34 percentage points.

Table 5.3: Cumulative Continuation Rates by Year per 100 Acceptors and Demographic Characteristics

	Years of use				
	1	2	3	4	5
West Sumatra (1,287)	95.8	91.2	86.8	82.6	55.0
<u>Age of Acceptor</u>					
15-29 (365)	95.3	91.1	85.8	78.8	44.8
30-49 (922)	96.0	91.2	87.2	83.6	57.2
<u>No. of living children</u>					
0-2 (329)	95.7	91.5	87.8	80.6	22.0
3 or more (958)	95.8	91.1	86.5	83.1	57.6
<u>Age of last child (in years)**</u>					
0-2 (277)	89.2	73.4	60.5	54.9	27.3
3 or more (1,010)	97.5	95.1	92.1	88.0	61.0
West Java (1,820)	96.4	93.1	88.2	80.7	32.3
<u>Age of Acceptor*</u>					
15-29 (953)	96.1	91.8	84.0	75.6	31.7
30-49 (867)	96.8	94.2	91.3	84.1	32.8
<u>No. of living children</u>					
0-2 (887)	96.8	93.3	86.9	80.5	30.9
3 or more (933)	96.1	92.9	89.1	80.8	33.2
<u>Age of last child (in years)**</u>					
0-2 (589)	93.6	87.6	76.7	67.2	34.9
3 or more (1,231)	97.5	94.8	90.9	83.8	31.3

Notes: Figure inside parenthesis indicates Number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

In West Java, cumulative continuation rates do not differ significantly according to age of acceptors and number of living children with one exception--the fourth-year continuation rate is higher for older acceptors than for younger acceptors (see Table 5.3). Although age of youngest child at the time of insertion is significantly related to continuation rate, differences in continuation rates between the two groups ('less than three years' and 'three years or more') are not as big in West Java as in West Sumatra. The difference in continuation rates between these two categories is seven percentage points at the first-year and the difference over four years rose to 17 percentage points. Contrary to what was found in West Sumatra, the five-year continuation rate in West Java is slightly higher among those acceptors whose youngest child was less than three years old compared to those whose youngest child was three years or older.

5.3.2 Social and Economic Characteristics

The data presented in Table 5.4 indicates that there is no difference in cumulative continuation rates through the fourth year according to acceptor and spouse educational attainment in both provinces. The five-year continuation rates tend to be lower for acceptors or spouses who completed at least primary education than those who did not complete primary education.

Cumulative continuation rates are not significantly affected by whether acceptors have 'paid work' or 'no paid work'. In both provinces, the probability of acceptors continuing NORPLANT® implants through the fourth-year is slightly higher among those acceptors who engaged in paid work than those who did not have paid work. On the other hand, in West Java, the data show that acceptors who were not engaged in paid work tend to have a slightly higher continuation rate in the fifth year than those who had paid work (Table 5.4). In West Java, acceptors whose husbands were engaged in agricultural or agricultural related work appeared to have a slightly higher continuation rate at both the fourth and fifth year. But no difference is found in continuation rates according to types of spouse's paid work in West Sumatra.

5.3.3 Family Planning and Fertility Preference Characteristics

The use of family planning methods before the NORPLANT® implants is significantly related to the cumulative continuation rate. Continuation rate at the fifth year is highest among those acceptors who used an injectable contraceptive before the implants in both provinces (see Tables 5.5 and 5.6). In West Sumatra acceptors who used oral pills have the second highest continuation rate at the fifth year while in West Java it is among acceptors who did not use any method. In West Sumatra, cumulative continuation rates at one, two, and three years are lowest among acceptors who did not use any method before NORPLANT® implant while in West Java there is no real difference between acceptors who 'used any method' and those who 'did not use' a method before NORPLANT® implant, with the exception of IUD users who are very few in number.

The data presented in Tables 5.5 and 5.6 reveal that there is no significant difference in cumulative continuation rates according to different family planning and fertility preference variables considered in this analysis. In West Java, however, the data presented in Table 5.6 suggests that the five-year continuation rates are slightly higher among those acceptors who switched directly from another contraceptive to NORPLANT® implant, those acceptors who have access to a clinic at a distance of three kilometers or more, who received NORPLANT® implants at Puskesmas and during Safaris, and who decided to access NORPLANT® implants within a short period of time (less than 24 hours). The relationship between the five-year continuation rate and family planning characteristics is different in West Sumatra than what is found in West Java.

Table 5.4: Cumulative Continuation Rates by Year per 100 Acceptors and Social and Economic Characteristics

	Years of use				
	1	2	3	4	5
West Sumatra (1,287)	95.8	91.2	86.8	82.6	55.0
<u>Educational Attainment</u>					
< Primary (634)	94.9	91.0	86.7	82.4	58.6
Primary+ (651)	96.6	91.3	86.8	82.8	51.2
<u>Spouse's Education</u>					
< Primary (407)	94.8	90.4	86.4	80.8	59.8
Primary+ (866)	96.3	91.5	86.9	83.6	53.0
<u>Paid Work</u>					
None (776)	96.0	90.6	85.6	80.2	55.3
Yes (507)	95.4	92.0	88.5	86.0	53.4
<u>Spouse's Paid Work</u>					
Non-agri (293)	95.5	92.2	86.8	80.6	54.3
Agri-fi-oth(994)	95.8	90.8	86.8	83.3	55.2
West Java (1,820)	96.4	93.1	88.2	80.7	32.3
<u>Educational Attainment</u>					
< Primary (989)	95.6	93.2	89.3	81.2	33.3
Primary+ (830)	97.4	92.9	86.5	79.7	30.6
<u>Spouse's Education</u>					
< Primary (659)	95.6	92.2	89.5	82.1	36.7
Primary+ (1,155)	96.9	93.7	87.8	80.1	29.4
<u>Paid Work</u>					
None (1,363)	96.3	92.2	87.8	77.8	33.8
Yes (457)	96.9	95.6	89.4	87.3	28.7
<u>Spouse's Paid Work</u>					
Non-agri (429)	95.8	91.2	88.2	75.7	25.2
Agri-fi-oth(1,391)	96.6	93.7	88.1	83.0	36.0

Notes: Figure inside parenthesis indicates Number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

'Agri-fi-oth' refers to agriculture, fishery and others.

'Non-agri' refers to non-agriculture works.

Table 5.5: Cumulative Continuation Rates by Year per 100 Acceptors and Family Planning and Fertility Preference Characteristics: West Sumatra

	Years of use				
	1	2	3	4	5
All Acceptor(1,287)	95.8	91.2	86.8	82.6	55.0
<u>Previous Method Used*</u>					
None (465)	93.7	87.9	84.5	81.1	48.6
IUD (103)	96.1	91.9	77.4	72.6	-
Injectables(400)	96.5	91.3	88.3	84.0	62.9
Pills (319)	97.8	95.4	91.2	86.1	58.4
<u>Method Switch</u>					
Directly (456)	97.6	94.3	90.7	84.3	54.6
Time gap (365)	96.1	91.2	84.6	82.4	68.6
<u>Distance to Clinic</u>					
0-2 km (616)	97.2	92.2	88.2	83.8	59.8
3km or more(622)	94.0	89.5	84.4	80.9	50.5
<u>Service Center</u>					
Puskesmas (688)	96.0	92.7	88.7	84.3	55.7
Others (599)	95.4	89.4	84.6	80.6	54.0
<u>Type of Provider</u>					
Doctor (204)	97.1	94.0	88.1	86.3	51.5
Midwife (968)	95.6	90.6	86.3	81.9	58.2
<u>Type of Service</u>					
Safari (1,117)	95.7	90.7	86.8	82.9	55.9
Non-safari (168)	96.4	94.3	86.2	78.5	46.5
<u>Time taken to decide</u>					
Same day (686)	95.3	89.9	85.6	80.7	54.3
Long before(582)	96.2	92.8	88.1	84.9	57.3
<u>Expect More Child</u>					
Yes (366)	95.8	90.9	83.9	76.3	53.2
No (548)	95.4	90.5	86.8	84.7	55.6
Not sure (372)	96.2	92.4	89.5	84.9	57.1

Notes: Figure inside parenthesis indicates Number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

- too few case to estimate the rate.

Table 5.6: Cumulative Continuation Rates by Year per 100 Acceptors and Family Planning and Fertility Preference Characteristics: West Java

	Years of use				
	1	2	3	4	5
All Acceptor(1,820)	96.4	93.1	88.2	80.7	32.3
<u>Previous Method Used*</u>					
None (337)	94.5	91.0	84.8	76.6	23.7
IUD (48)	97.3	83.8	83.8	75.4	-
Injectables (913)	96.8	94.2	89.9	84.6	41.4
Pills (520)	96.9	93.2	87.3	73.8	10.1
<u>Method Switch</u>					
Directly (1,014)	97.0	93.3	88.7	82.6	36.9
Time gap (469)	96.6	94.4	89.6	77.8	25.3
<u>Distance to Clinic</u>					
0-2 km (450)	96.0	92.3	86.1	79.0	22.1
3km or more(1,370)	96.6	93.4	89.0	81.2	35.4
<u>Service Center</u>					
Puskesmas (627)	97.5	94.3	88.1	81.2	34.6
Others (1,193)	95.8	92.5	88.3	80.3	30.8
<u>Type of Provider</u>					
Doctor (387)	95.7	92.8	90.3	83.0	33.1
Midwife (1,063)	96.8	93.3	86.3	78.0	32.4
<u>Type of Service</u>					
Safari (1,632)	96.3	93.2	88.7	80.7	34.3
Non-safari (181)	98.2	92.6	83.3	80.9	12.2
<u>Time taken to decide</u>					
Same day (998)	95.9	92.1	87.0	80.9	32.8
Long before(683)	97.2	94.5	90.1	79.0	28.2
<u>Expect More Child</u>					
Yes (711)	96.5	92.5	86.6	77.3	28.2
No (623)	96.3	92.9	89.2	81.1	35.5
Not sure (484)	96.5	94.1	88.8	84.5	33.9

Notes: Figure inside parenthesis indicates Number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

- too few cases to estimate the rate.

In contrast to West Java, Table 5.5 indicates that the five-year continuation rates in West Sumatra are higher among NORPLANT® acceptors who had a time gap between the previous method use and NORPLANT® acceptance, acceptors who lived within two kilometers of a clinic, and acceptors who had their implants inserted by a midwife. In both provinces, acceptors who received service at Safaris have a higher continuation rate than those who received service at non-Safaris.

In both provinces, cumulative continuation rates at three, four, and five years are somewhat lower among those NORPLANT® acceptors who wanted more children in the future than those who did not want or those who were not sure whether they wanted more children in the future (Tables 5.5 and 5.6).

5.3.4 Acceptor Knowledge Characteristics

Five variables relating to acceptors' knowledge, namely: knew the NORPLANT® implant has six capsules; knew it is effective for five years; knew it needs to be removed at the end of five years; knew possible to remove the implant before five years; and knew of possible changes in menstrual bleeding pattern, were considered in studying differential continuation rates. The pattern and the strength of the relationship between these variables and continuation rates are not always the same across and within the provinces.

The data presented in Tables 5.7. and 5.8 suggests that NORPLANT® acceptors who had knowledge of the basic facts on NORPLANT® implants, with the exception of the variable 'knew possible to remove before five years', tended to continue for a somewhat longer period than those who did not have this knowledge. Similarly, acceptors who did not know that it is effective for five years have a higher five-year continuation rate compared to those who did know.

In West Java, the first-year continuation rate for those acceptors who knew that the NORPLANT® implant is effective for five years is six percentage points higher than those who did not know and over four years it rose to nine percentage points higher. However, the difference fell to only four percentage points over five years and then switched so that the continuation rate for those who did not know the implant was effective for five years was higher than those who did not know. The difference in this category at the five-year continuation rate is as much as 14 percentage points in West Sumatra.

Table 5.7: Cumulative Continuation Rates by Year per 100 Acceptors and Acceptor's Knowledge: West Sumatra

	Years of use				
	1	2	3	4	5
All Acceptor (1,287)	95.8	91.2	86.8	82.6	55.0
<u>Knew NORPLANT® has six capsules</u>					
No (390)	93.5	89.3	86.2	81.9	51.7
Yes (897)	96.7	92.0	87.1	82.8	56.1
<u>Knew NORPLANT® effective for five years</u>					
No (102)	95.0	89.3	81.3	76.4	67.9
Yes (1,140)	95.9	91.3	87.2	83.2	53.4
<u>Knew NORPLANT® to be removed at the end of five years**</u>					
No (68)	91.0	84.6	75.6	63.9	45.4
Yes (1,219)	96.0	91.5	87.4	83.6	55.4
<u>Knew NORPLANT® possible to remove before five years**</u>					
Yes (764)	95.0	88.7	82.6	77.1	50.6
No (523)	96.9	94.8	93.1	90.9	62.0
<u>Changes in Menstrual Pattern</u>					
No (743)	96.2	91.9	88.2	83.6	55.3
Yes (522)	94.9	90.3	85.0	81.6	56.4

Notes: Figure inside parenthesis indicates number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

Table 5.8: Cumulative Continuation Rates by Year per 100 Acceptors and Acceptor's Knowledge: West Java

	Years of use				
	1	2	3	4	5
All Acceptor(1,820)	96.4	93.1	88.2	80.2	32.3
<u>Knew NORPLANT® has six capsules</u>					
No (304)	95.4	89.8	84.8	80.3	28.4
Yes (1,516)	96.6	93.7	88.8	80.8	32.9
<u>Knew NORPLANT® effective for five years**</u>					
No (64)	90.1	86.0	78.0	71.8	35.9
Yes (1,690)	96.9	93.6	88.7	80.9	31.7
<u>Knew NORPLANT® to be removed at the end of five years</u>					
No (138)	93.4	90.7	86.5	75.5	33.6
Yes (1,678)	96.7	93.3	88.4	81.0	32.1
<u>Knew NORPLANT® possible to remove before five years**</u>					
Yes (609)	94.0	88.4	78.7	64.3	30.4
No (1,210)	97.7	95.7	93.7	90.1	32.4
<u>Changes in Menstrual Pattern</u>					
No (942)	96.0	92.8	87.6	81.3	24.2
Yes (832)	97.2	94.0	89.3	80.6	40.5

Notes: Figure inside parenthesis indicates number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

Although the difference in continuation rates between NORPLANT® acceptors who knew the implants should be removed at the end of five years and those who did not know is small in West Java, the Lee-Desu statistic⁹ indicates that the relationship between this variable and the continuation rate is statistically significant in West Sumatra. In West Sumatra, the first-year continuation for those acceptors who knew implants should be removed at the end of five years is five percentage points, over four years it rose to 20 percentage points, and over five years it fell to 10 percentage points (Table 5.7).

Contrary to the findings based on the above knowledge variables, there is a strong inverse relationship between continuation rate and 'knew possible to remove before five years'. The fourth panel of Tables 5.7 and 5.8 reveal that the probability of continuing implant usage is significantly higher among NORPLANT® acceptors who did not know that it is possible to remove it before five years than those who knew the possibility of removal before five years. The cumulative continuation rate over four years is 26 percentage points greater among NORPLANT® acceptors who did not know of the possibility of removing it before five years than those who knew in West Java. Over the same period, the difference is approximately 14 percentage points in West Sumatra.

Knowledge regarding possible changes in menstrual bleeding pattern does not seem to have an effect on the cumulative continuation rate, with the exception of the five-year continuation rate in West Java. The West Java five-year continuation rate suggests that the probability of continuing the NORPLANT® implant is 17 percentage points higher among those NORPLANT® acceptors who knew of possible changes in menstrual bleeding pattern than those who did not know (Table 5.8).

It is to be noted from the above analysis that the "removal" variable shows large differences in continuation, whereas other knowledge variables, e.g. regarding six capsules, and menstrual patterns, do not do so -- which probably implies that a circularity problem exists for others. This suggests a further analysis on the relationship between knowledge and continuation rate.

⁹ This statistic is calculated to test the null hypothesis that survival distributions are the same for the subgroups.

5.3.5 Counseling and Screening

The cumulative continuation rate does not seem to be affected by whether or not health workers talked to NORPLANT® acceptors before the implant insertions. However, the data presented for West Java in Table 5.9 strongly suggests that the five-year continuation rate is higher among NORPLANT® acceptors who talked to a health worker before the implant insertions (39 per 100 acceptors) compared to those who did not talk to a health worker (24 per 100 acceptors).

Table 5.9: Cumulative Continuation Rates by Year per 100 Acceptors by Counseling and Screening

		Years of use				
		1	2	3	4	5
West Sumatra	(1,287)	95.8	91.2	86.8	82.6	55.0
<u>Talked With Worker</u>						
No	(557)	95.5	91.0	87.1	82.7	56.9
Yes	(699)	96.1	91.5	86.5	82.2	52.1
<u>Medical History Taken</u>						
No	(599)	96.0	91.2	86.0	82.0	55.2
Yes	(674)	95.5	90.9	87.2	82.9	54.6
<u>Physical Examination Performed*</u>						
No	(88)	94.2	85.6	79.2	72.4	40.0
Yes	(1,198)	95.9	91.5	87.4	83.3	56.0
West Java	(1,820)	96.4	93.1	88.2	80.2	32.3
<u>Talked With Worker</u>						
No	(886)	96.2	92.6	87.4	78.7	23.4
Yes	(861)	96.6	93.4	89.3	83.2	39.0
<u>Medical History Taken**</u>						
No	(628)	99.0	95.5	90.3	84.7	72.2
Yes	(1,165)	96.9	94.7	90.0	85.2	38.2
<u>Physical Examination Performed</u>						
No	(75)	91.6	86.2	79.1	73.6	24.5
Yes	(1,736)	96.6	93.4	88.5	80.9	32.6

Notes: Figure inside parenthesis indicates number of respondents.

* Mean scores are significantly different at 5 % level.

** Mean scores are significantly different at 1 % level.

While taking the medical history of NORPLANT® acceptors before the implant insertions does not seem to improve the cumulative continuation rate in West Sumatra, the five-year continuation rate is almost double for NORPLANT® acceptors in West Java who had their medical history taken compared to those who did not.

Table 5.9 clearly indicates that NORPLANT® acceptors who had a physical examination before insertion are more likely to continue NORPLANT® implant usage than those with no physical examination. Differences in continuation rates between these two groups are more pronounced in West Sumatra than in West Java. In West Sumatra, the five-year continuation rate is higher by as much as 16 percentage points for NORPLANT® acceptors with a physical examination before insertions than for those without a physical examination.

6. SUMMARY, CONCLUSION, POLICY IMPLICATIONS

6.1 Summary and Conclusion

Indonesia's national family planning program constitutes the largest and most ambitious introduction of NORPLANT® contraceptives in the world, with the cumulative number of insertions estimated to exceed 1.57 million as of July 1992.

The findings from the NORPLANT® Contraceptive Use-Dynamics Study indicate that fifty-eight percent of West Sumatran acceptors and 72 percent of acceptors in West Java started using implants before their 30th birthdate. In West Sumatra, nearly half of the acceptors surveyed had at least 1-3 living children, and in West Java the majority (70 percent) had only 1-3 living children. A large majority of the NORPLANT® contraceptive acceptors and their spouses have received some formal education, but the majority of acceptors have no paid work.

Most NORPLANT® contraceptive acceptors previously used another form of contraception (usually injectables and oral pills) and switched to NORPLANT® contraceptive directly, without interruption in contraceptive use. More than two-fifths in West Sumatra and one-third in West Java did not want more children at the time of the survey, but, at the time of insertions, the majority of acceptors adopted the NORPLANT® contraceptive for birth spacing purposes.

The majority of acceptors in both West Sumatra (77 percent) and West Java (66 percent) experienced no complications at the insertion site. Approximately three percent in West Sumatra and five percent in West Java reported having infection at insertion sites. A small percentage of acceptors reported other complaints, including pain, itching, and numbness at the insertion site, a result of inadequate aseptic procedures.

More than one-half of the acceptors experienced a change in menstrual pattern. The most frequently reported menstrual disturbances include amenorrhea, scanty period, spotting between periods, prolonged bleeding, or longer and heavier bleeding than normal. Other adverse side-effects reported by small proportions of respondents are headache, nausea or other hormonal effects, and heart related symptoms.

In both provinces the proportion of acceptors experiencing no side-effects is significantly higher among acceptors who are currently using or continued through the fifth year than those who discontinued before the fifth year.

Disruption of the menstrual cycle and other medical reasons are the major factors in discontinuing implant use. Very early removal (defined as < 1 yr.) of the NORPLANT® contraceptive is less than five percent in both provinces. Non-medical reasons for termination included undetected pregnancy before insertion and fear of side effects.

The continuation rate over a four-year period was about 80 percent in both provinces and in most sub groups. The five-year continuation rate was 55 percent in West Sumatra and 33 percent in West Java. The fall-off suggests that many acceptors are returning for removal at or just before the five year deadline, as they should. The five-year failure rate was two percent in West Sumatra and 0.4 percent in West Java.

The proportion of NORPLANT® contraceptive acceptors who did not show up for the five-year removal is not substantial, but, in Indonesia as a whole, the number of acceptors requiring the five-year removals is likely to escalate due to the increase in NORPLANT® contraceptive users from 1988/89.

The NORPLANT® contraceptive insertions were carried out mostly by midwives who had been working at their current clinics for a longer period of time than the doctors. Just over one-half of the doctors surveyed reported having received training on the NORPLANT® contraceptive. Three-fourths of the West Javan and approximately one-third of the West Sumatran midwives had also received NORPLANT® contraceptive training. Most field workers (S. PLKBs, PLKBs and PPKBDs) have not yet received any NORPLANT® contraceptive training.

The level of knowledge regarding the NORPLANT® contraceptive is low among most providers, field workers, and volunteers. Most health workers do not know that the NORPLANT® contraceptive can be removed before five years; is effective within a few hours of insertion; the exact timing of insertions; conditions under which NORPLANT® contraceptive can be damaged; the five-year expiration period; and that the NORPLANT® contraceptive releases progestin in continuous low dosages. While health workers are also unaware of the contraindications for using NORPLANT® implants, most do know that the most common side-effect of NORPLANT® implants involves changes in the menstrual bleeding pattern. Most providers reported a lack of NORPLANT® contraceptive informational materials at their clinics and perceived a need for additional IEC materials for themselves and for their clients.

Doctors and midwives perceive that facilities for the delivery of the different components of NORPLANT® contraceptive service are inadequate, but, with the exception of examination tables, they have all equipment required for insertions and removals. However, recommended aseptic conditions are not consistently maintained during NORPLANT® contraceptive service delivery. Some providers do not discard disposable needles and syringes after each use and instruments, linens, and gloves are

not being sterilized at 121 degrees celsius for a minimum of 20 minutes as recommended by the World Health Organization. Some providers are not sharpening and others are discarding blunt trocars which could be used for up to 100 insertions after sharpening.

There was very little or no verbal interaction between the service provider (doctor or midwife) and the client before insertions. Completing a medical history form, identification of risk factors, and obtaining the client's complete address were least mentioned by providers as part of their NORPLANT® contraceptive procedures. The study revealed that not all NORPLANT® contraceptive acceptors knew about the NORPLANT® contraceptive before insertion and a substantial proportion of acceptors did not discuss the contraceptive with health workers before insertion. While most acceptors were given a physical examination before insertion, only one-half had their medical history taken. The proportion of early terminations, including 18 undetected pregnancies before insertion, would have been reduced considerably if all NORPLANT® contraceptive acceptors had undergone proper screening and counseling.

Interaction between acceptor and provider post implant insertion occurred only if the client faced complications. Providers encouraged the NORPLANT® contraceptive acceptors to return to the clinic for periodic health check-ups and in the event of heavy bleeding, problems listed under warning signs, concerns or problems with the method, wanting to have a child; and needing the address of a clinic that provides NORPLANT® contraceptive services in another area.

The study supports the fact that providers encouraged women to continue using the implants despite complaints or fear of the NORPLANT® contraceptive. Small percentages of acceptors reported that their requests for removal of the NORPLANT® contraceptive were not granted because of the lack of removal services or because their reasons were irrelevant to the NORPLANT® contraceptive. Very few doctors and midwives thought that it was the providers' responsibility to ensure a client's access to removal.

The majority of acceptors who discontinued the implants received removal services upon one request. However, implant acceptors who wanted to discontinue implant use had to bear a cost for removal. On the average, they had to pay Rupiah 9,000 for the removal services.

Findings from this study reveal that knowledge of removal before five years affects the number of requests for early removal. Of the women who were currently using NORPLANT® implants and had requested removal, approximately one-half in West Sumatra and one-third in West Java knew that the implants could be removed before five years. The information on the NORPLANT® contraceptive of which acceptors were least knowledgeable was the 'possibility of removal before five years'

In general, most NORPLANT® contraceptive acceptors interviewed in this study reported that they are satisfied with the services which they have been receiving. But of those acceptors who were not satisfied with the services, inadequate counseling and information, poor personal treatment, a long waiting time for the service, clinic too far away, and inadequate facilities were the most common causes of dissatisfaction. Some revealed that they did not have the choice of alternative methods. Among those not satisfied with information provided, most NORPLANT® contraceptive acceptors wanted information on the availability of removal, side-effects, and what to do if problems occur.

The rate of complaint is lowest for those who had implants inserted at Posyandu or inserted by doctors or for those who had a physical examination performed before insertion. Acceptors who had the implants inserted at a public hospital or had no medical history taken or no physical examination performed before insertion are more likely to report complications at the insertion site.

An overwhelming majority of NORPLANT® contraceptive acceptors indicated that they were satisfied with the contraceptive which is the preferred method among current users and those who discontinued after the fifth year. However, one out of three NORPLANT® contraceptive acceptors revealed that they will not recommend the contraceptive to others and the proportion varies according to the current use status of the acceptors. In West Sumatra, most of the acceptors who will not recommend NORPLANT® contraceptive will not do so because of side-effects while in West Java it is because of other reasons.

Among current users, a large proportion revealed that they are not sure whether or not they will have the implants re-inserted after discontinuing the implants use. Of those who did not wish to have the implants re-inserted, only one-fourth want to adopt a different contraceptive method. Among those who discontinued the implants use, less than one-third in West Sumatra and approximately one-half in West Java continued contraceptive use with another method. This could result in a serious set back in contraceptive use.

Five-year continuation rate vary somewhat according to socio-economic and demographic characteristics of the acceptors. Continuation rates in West Sumatra are higher among older women, women with three or more living children, and women whose youngest child was three years or older at the time of acceptance. Rates are low among those acceptors who did not use any contraceptive method before the NORPLANT® contraceptive.

Findings from this study reveal that NORPLANT® contraceptive acceptors who know the basic facts about the contraceptive with the exception of the variable 'knew possible to remove before five years', tend to continue use for a somewhat longer

period than those who did not know. There is a strong inverse relationship between continuation rates and 'knew possible to remove before five years'.

The West Java data strongly suggests that the five-year continuation rate is higher among NORPLANT® contraceptive acceptors who talked to health workers before the implant insertions compared to those who did not discuss the NORPLANT® contraceptive with health workers. The proportion of acceptors continuing through the fifth year is likely to be higher among those acceptors who gave their medical history and had a physical examination performed before insertion than those who did not.

6.2 Policy Implications

These survey findings have immediate implications for program policy. The most urgent need is for: NORPLANT® contraceptive information for all providers, field workers, volunteers, and clients. Priority subjects include the importance of sterile procedures in preventing infection during insertion and removal of the NORPLANT® contraceptive, common side-effects of the NORPLANT® contraceptive, especially changes in bleeding patterns and care of wound after insertion/removal, and sources of assistance for NORPLANT® contraceptive acceptors experiencing problems with the method.

Survey findings also point an immediate need for: retraining of trainers (providers) in sterile techniques, side effects and their management and providing information to women wanting the NORPLANT® contraceptive, a small scale demonstration study to improve the knowledge of providers, field workers, volunteers and clients, and a study to review the current tracking system for 5 year removal.

Medium and long term needs include: institutionalization of the NORPLANT® contraceptive method into all training programs which have a Family Planning component, and increased IE&C back up materials for providers using different media outlets.