# The Discontinuation Rate and Reasons for Discontinuation of Implanon at the Family Planning Clinic of University of Nigeria Teaching Hospital (UNTH) Enugu, Nigeria

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*ABSTRACT*

**BACKGROUND:** In spite of the popularity and effectiveness of the Implanon among family planning clients at University of Nigeria Teaching Hospital (U.N.T.H) Enugu Nigeria, some users discontinued its use for a variety of reasons.

**OBJECTIVE:** To determine the Implanon discontinuation rate and reasons for discontinuation among women attending University of Nigeria Teaching Hospital (U.N.T.H) Enugu, Nigeria.

**MATERIALS AND METHODS:** This retrospective survey comprised 63 women who had Implanon implant discontinued out of 295 women who had Implanon inserted between 2006 and 2008. The records of patient at the Family Planning Clinic of the hospital were analysed. The main outcome measured was Implanon discontinuation.

**RESULTS:** Sixty-three (21.4%) of women who had Implanon implant during this period discontinued its use. The discontinuation rate within six months of use was 3.0%, within one year, 8.1% and within two years, 19.3%. Thirty-six (12.2%) discontinued Implanon because of side effects while 27 (9.2%) discontinued because of desire for pregnancy. Fifteen (41.7%) out of the 36 women who discontinued because of side effects had menstrual abnormalities. Headache and dizziness accounts for the majority (38.1%) of non-menstrual reasons for discontinuation. There was no pregnancy recorded. All those who discontinued Implanon within six months of use were because of side effects.

**CONCLUSION:** The discontinuation of Implanon before its expiration is low once the users are adequately counseled. Implanon is well accepted among our clients but cost affect its wider use.

**KEYWORDS:** *implanon, discontinuation, family planning clinics, contraception.*

## INTRODUCTION

Implanon, classified as a second generation contraceptive implant, was developed by the Organon International and the use of Implanon was introduced in U.N.T.H in 2006. Implanon is a single-rod progestin implant used for contraception in women. The rod is semi-rigid, 40 mm in length, 2 mm in diameter, and made of plastic (ethylene vinylacetate). It is placed subdermally in the inner upper arm. Contraception is provided by slow release of 68 mg of the progestin etonogestrel, which is initially released at 60 to 70 mcg/day, decreasing to 35 to 45 mcg/day at the end of the first year, to 30 to 40 mcg/day at the end of the second year, and then to 25 to 30 mcg/day at the end of the third year [1].

The implant procedure is an outpatient procedure which can be done in the consulting room[2,3]. It renders the cervical mucus viscous, scanty and impervious to sperm, suppresses oestradiol-induced cyclic maturation of the endometrial lining causing hypotrophic changes and inhibits ovulation[1,4,5,6,7].

The reasons for removal include expiration of the implant, desire for pregnancy, side effects, want of another form of contraception, husband's wish, contraception failure, tired of it and menopause. After three months of using Implanon, women will need to schedule a follow-up appointment for evaluation and discuss any concerns. Side effects may include menstrual disturbance ranging from amenorrhoea, hypomenorrhoea intermenstrual bleeding and menorrhagia. Other common side effects include weight gain, nervousness, anxiety, nausea, vomiting, mastalgia, dizziness, dermatitis/rash, hirsutism, scalp-hair loss, headache, depression, and acne. Sometimes, pain, itching or infection at the site of the implant will occur. Implanon implants do not impair subsequent fertility because post-removal conception rates are virtually identical with those of IUD and injectables contraceptive users[6]. It is important to determine the discontinuation rate and reasons for discontinuation despite its effectiveness in Enugu,Nigeria.

## MATERIALS AND METHOD

This is retrospective analytical study. The records of patients who discontinued Implanon seen at the Family Planning Clinic of the University of Nigeria Teaching Hospital (UNTH) Enugu, South East, Nigeria were reviewed. Exclusion criteria included women who did not receive the implant in UNTH and women who mistakenly received the implant while pregnant. Data were obtained with proforma. The proforma gathered information on demographic characteristics, date of insertion of Implanon, date of discontinuation, reason for discontinuation and any other form of contraception accepted after discontinuation.

Responses were summarized using descriptive statistics of statistical package of social sciences (SPSS) for windows version 11.0

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## RESULTS

Sixty three women who had Implanon insertion discontinued out of 295 women who had Implanon inserted between 2006 and 2008 were the subject of this review. Their characteristics were as shown in Table 1. Their ages ranged from 21-48 years with a mean of 33.23 5.8 years. Parity 0-2 accounted for 44.6% of the women that discontinued Implanon. Most (76.2%) had more than secondary level of education. Twenty-eight (44.4%) were not on any method of contraception before commencing the use of Implanon.

Table 2 shows the duration of use before discontinuation. Sixty-three (21.4%) of women who had Implanon implant during this period discontinued its use. The discontinuation rate within six months of use was 3.0%, within one year, 8.1% and within two years, 19.3%.

**Table 1. Characteristics data of Implanon subjects (n = 63)**

| Characteristics | Number | Percent |
|---|---|---|
| **Age** | | |
| <20 years | 0 | 0.0 |
| 21-30 years | 15 | 23.8 |
| 31-40 years | 39 | 61.9 |
| >40 years | 9 | 14.3 |
| Mean age = 33.3 5.8 years, range 21-48 years | | |
| **Parity** | | |
| 0 | 3 | 4.8 |
| 1 | 6 | 9.5 |
| 2 | 21 | 33.3 |
| 3 | 6 | 9.5 |
| 4 | 15 | 28.8 |
| e 5 | 12 | 19.0 |
| **Education** | | |
| Primary school | 3 | 4.8 |
| Secondary school | 12 | 19.0 |
| Tertiary | 48 | 76.2 |
| **Status at base line** | | |
| Change from Norplant | 7 | 11.1 |
| On other method of contraception | 19 | 30.2 |
| Post partum period | 9 | 14.3 |
| On no other method of contraception | 28 | 44.4 |

**Table 2.** Duration of use before discontinuation.

| Duration of use | Number of discontinuation | Percentage of discontinuation |
|---|---|---|
| >6 months | 9 | 14.3 |
| 6 months - > 1 year | 15 | 23.8 |
| 1 year - > 2 years | 33 | 52.4 |
| 2 years - > 3 years | 6 | 9.5 |
| Total | 63 | 100 |

The stacked bar chart shows the relationship between the duration of use and reasons for discontinuation. Thirty-six discontinued Implanon because of side effects while 27 discontinued because of desire for pregnancy. All those who discontinued Implanon within six months of use (9) were because of side effects.

Fifteen (41.7%) out of the 36 women who discontinued because of side effects had menstrual abnormalities. Table 3 shows the non-menstrual reasons for discontinuation of Implanon. Headache and dizziness accounted for the majority (38.1%) of non-menstrual reasons for discontinuation. There was no pregnancy recorded.

**Stacked bar chart** of duration of use and reasons for discontinuation

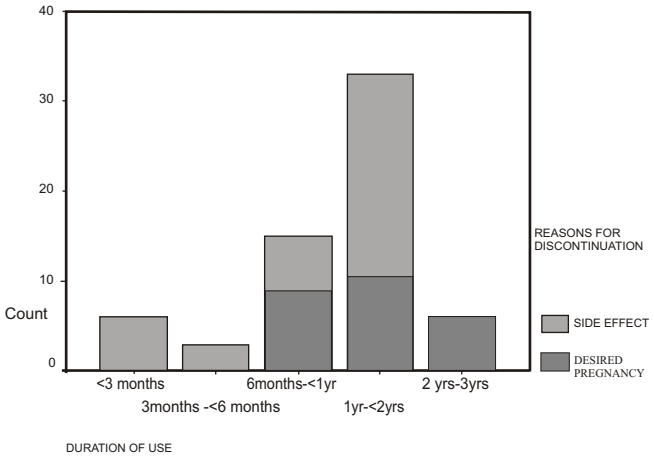


**Table 4.** Non-menstrual reasons for discontinuation of Implanon

| Non-menstrual Reasons | Number | Percentage | Discontinuation Rate (%) |
|---|---|---|---|
| Headache/Dizziness | 8 | 38.1 | 2.7 |
| Abdominal pain | 1 | 4.8 | 0.3 |
| Breast tenderness | 2 | 9.5 | 0.7 |
| Pain at the site of insertion | 4 | 19.0 | 1.4 |
| Mood change | 6 | 28.6 | 2.0 |
| Total | 21 | 100 | 7.1 |

## DISCUSSION

The age and parity range of in the studied population are similar to those obtained in Thailand[8]. This study revealed that the discontinuation rate of Implanon after one year of use is 8.1%. This is similar to results from other studies,[2,8,9,10] though lower than 19.5% obtained in a study in Eastern Turkey[11]. This is because it is an effective and long-term contraceptive methods that meet the needs of women who desire long-term contraception[4,5,6,10]. Its effectiveness could also be the reason that no pregnancy was reported as a reason for discontinuation. The two years discontinuation rate of Implanon is 21.4%. This is quite high but considering that 9.12% discontinued because desired pregnancy, it is still similar to other studies.[5,6,10]. This also reflects the

acceptability of Implanon among women for child spacing.

Thirty-six (12.2%) discontinued Implanon because of side effects while 27 (9.2%) discontinued because of desire for pregnancy. Fifteen (41.7%) out of the 36 women who discontinued because of side effects had menstrual abnormalities. Since Implanon is a progestogen-only contraceptive, it was not surprising that menstrual abnormality was reported as the commonest adverse effect for discontinuing Implanon[2,6,8,9,10,11,13]. Irregular menstrual bleeding accounted for majority (60%) of the population that discontinued because of menstrual abnormality.[2,4,10,11,12,13].

It was interesting to note that headache and dizziness were the most (38.1%) frequent non-menstrual adverse effects for discontinuing Implanon. This accounted for a discontinuation rate of 12.6% higher than values obtained from other studies.[8,10,14] Probably this could due to inadequate counseling. It is also important to note that Implanon was not discontinued because of weight gain. This is contrary to similar studies.[2,10,11] The other reported non-menstrual reason for discontinuation are similar to most studies.[9,10,11,15,16]

Considering the effectiveness of Implanon,[10] there is need to make it easily available, accessible and affordable. There is need to improve the existing systems by Governments in most developing countries sponsoring projects and research in contraceptive technology. This is because there is the need to find progestogenic compounds that are less androgenic than levonorgestrel so that side effects would be less common; the need for biodegradable implants, thus eliminating the need for removal. The place for adequate pre and post insertion counseling can never be overemphasized. Health workers should be trained in the act of contraceptive counseling. It is important that Government and Non-governmental organizations double their efforts at ensuring an appreciable continuation rate of contraceptive use in general and implants in particular, among Nigerian women to control the rapid growing population.

In conclusion, implanon is well accepted among clients in family planning clinics in Enugu,Nigeria. However cost and non-availability may limit its wide spread use.

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