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Women's contraceptive choice following the use of Implanon NXT: Findings from a study in Durban, South Africa

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Abstract

Implanon NXT was introduced in South Africa (SA) in 2014 to expand the contraceptive method mix. While studies have explored patterns of implant use, data on contraceptive choice following implant removal is limited. Here, we describe contraceptive choice among 120 women requesting Implanon NXT removal, between 2017 and 2018, at an urban reproductive health clinic in Durban, SA. Among women who used the implant for three years (n=91), >50% chose to reinsert Implanon NXT. Reasons for choosing to reinsert included satisfaction with the implant, the desire for a long-acting method and having had no side effects. A third of women chose not to reinsert Implanon NXT after three years due to side effects such as problematic bleeding. Most women requesting early removal of the implant switched to male condoms, injectables or oral contraceptives. Contraceptive services should provide women with contraceptive options and allow women to make informed decisions regarding contraceptive choice, in addition to providing support and managing side effects among Implanon NXT users. *(Afr J Reprod Health 2021; 25[1]: 41-48).*

Keywords: Implanon, contraception, informed choice, reinsertion, South Africa

Résumé

Implanon NXT a été introduit en Afrique du Sud (SA) en 2014 pour élargir la gamme de méthodes contraceptives. Alors que les études ont exploré les modèles d'utilisation des implants, les données sur le choix de la contraception après le retrait de l'implant sont limitées. Ici, nous décrivons le choix de la contraception parmi 120 femmes demandant le retrait d'Implanon NXT, entre 2017 et 2018, dans une clinique de santé reproductive urbaine à Durban, SA. Parmi les femmes ayant utilisé l'implant pendant trois ans (n = 91),> 50% ont choisi de réinsérer Implanon NXT. Les raisons du choix de la réinsertion comprenaient la satisfaction à l'égard de l'implant, le désir d'une méthode à action prolongée et l'absence d'effets secondaires. Un tiers des femmes ont choisi de ne pas réinsérer Implanon NXT après trois ans en raison d'effets secondaires tels que des saignements problématiques. La plupart des femmes demandant le retrait précoce de l'implant sont passées aux préservatifs masculins, aux injectables ou aux contraceptifs oraux. Les services de contraception devraient offrir aux femmes des options contraceptives et leur permettre de prendre des décisions éclairées concernant le choix de la contraception, en plus de fournir un soutien et de gérer les effets secondaires parmi les utilisatrices d'Implanon NXT. *(Afr J Reprod Health 2021; 25[1]: 41-48).*

Mots-clés: Implanon, contraception, choix éclairé, réinsertion, Afrique du Sud

Introduction

In South Africa (SA), the contraceptive prevalence rate among sexually active women aged 15-49 years is estimated to be 60%, with injectables being the most common method used[1]. One of the key considerations in the current South African National Contraception and Fertility Planning Guidelines is to provide women with improved access to contraception and expanded contraceptive choice[2]. This included the introduction of Implanon NXT, a single rod, etonogestrel containing subdermal contraceptive implant that was introduced by the SA National Department of Health (NDoH) in 2014[3]. Implanon NXT is a long-acting reversible contraceptive (LARC) that offers the benefit of being highly effective and having a long duration of action (three years)[4]. In SA, the number of contraceptive implants inserted increased from 49 813 in 2016/2017 cycle to 213 260 in 2018/2019, but overall use was still low compared to intramuscular Depo medroxyprogesterone (DMPA-

IM) injections where over six million units were provided[5].

Despite the multiple benefits offered by Implanon NXT, women may choose to discontinue the implant for a variety of reasons[6–9]. Side effects are frequently reported as a reason for requesting removal, predominantly changes in menstrual pattern and headaches[7–9]. Women may also discontinue implants and other contraceptives because they desire fertility or are no longer sexually active. Of concern is that data from a review of Demographic and Health Surveys (DHS) indicate that 38% of women with an unmet need for contraception have discontinued a modern contraceptive previously[10]. However, not all discontinuations are problematic and women who discontinue methods might switch to other methods which they find more suitable or preferable[10]. It is also logical that as women age, their contraceptive needs may change. Currently, there are limited data on insights into contraceptive preferences and switching of methods in SA. Furthermore, Implanon NXT was introduced in SA later than in other countries, therefore data on continued Implanon NXT use following a three-year cycle is lacking.

In this analysis we evaluate contraceptive choice among women requesting removal of Implanon NXT at a reproductive health clinic in Durban, SA. We include women who requested early removal of the implant as well as women who used the implant for three years.

Methods

We conducted a cross-sectional study from December 2017 to April 2018 among 120 women requesting removal of Implanon NXT at an urban public sector reproductive health clinic in Durban, KwaZulu-Natal, SA. All services provided at the clinic, including contraception, are at no cost to clients. The primary objective of the study was to explore reasons for requesting removal of Implanon NXT and the results of this analysis have been published[11]. A secondary objective of the study was to explore contraceptive method choice following Implanon NXT removal, which we present in this analysis.

An interviewer-administered questionnaire (available in English and isiZulu) was conducted by trained study staff among women requesting Implanon NXT removal. Consecutive sampling was used. Women had to be 18 years or older to be eligible. Data were collected on demographics, previous contraceptive use, experience with Implanon NXT, reasons for requesting removal of Implanon NXT, as well as contraceptive choice following removal. Reasons for contraceptive choice following Implanon NXT removal were explored using an open-ended question. The interview was conducted on the day the woman presented at the clinic requesting removal.

Written informed consent was obtained from all women who participated in this study. Women were reimbursed ZAR70 (~$4.26) for their time. Data were captured electronically onto the REDCap® electronic data capture tools hosted at the University of the Witwatersrand[12] and analysed using Stata version 14 (StataCorp, College Station, USA)[13]. A descriptive analysis was conducted. Open-ended questions were coded into categories and descriptively analysed.

Results

In total, 120 women were interviewed. The median age was 27 years (IQR: 24-32). Most women were Black (115, 95.8%), had completed secondary school education (103, 85.8%), and were unmarried and not living with their partner (83, 69.2%). Upon trial entry, two-thirds (85, 70.8%) had ever used male condoms, 94 (78.3%) had used injectable contraceptives and 23 (19.2%) had used oral contraceptives. Only 5 (4.2%) women had used Implanon NXT previously, and none had used the IUD. Seven (5.8%) women had not used a contraceptive method previously. More than 80% of women had ever been pregnant. Among the 120 women presenting at the clinic and requesting removal of Implanon NXT, 91 (75.8%) had used the implant for three years, and the remaining 29 (24.2%) had requested removal prior to three years of use. Of the 91 women who had used the implant for three years, more than half (52, 57.1%) chose to

Table 1: Contraceptive method choice among all women requesting removal of Implanon NXT

Contraceptive Method	Early removal of Implanon NXT (N=29) N (%)	Removal of Implanon NXT after 3 years (N=91) N (%)	Total N=120 N (%)
Implanon NXT	1 (3.4)*	52 (57.1)	53 (44.2)
3-month injectable	5 (17.2)	7 (7.7)	12 (10)
2-month injectable	1 (3.4)	6 (6.6)	7 (5.8)
Male condoms	8 (27.6)**	6 (6.6)	14 (11.7)
IUD	3 (10.3)	5 (5.5)	8 (6.7)
Oral contraceptives	5 (17.2) **	5 (5.5)	10 (8.3)
Tubal Ligation	1 (3.4)	2 (2.2)	3 (2.5)
Unsure	0 (0)	1 (1.1)	1 (0.8)
Contraceptive patch	1 (3.4)	0 (0)	1 (0.8)
None	4 (13.8)	7 (7.7)	11 (9.2)

* 1 woman was advised by a healthcare provider to have Implanon NXT removed and reinserted prior to three-years due to prolonged spotting

**3 women chose to use male condoms and 1 woman chose oral contraceptives due to a lack of injectable contraceptives at the clinic

Table 2: Reasons for choosing to reinsert Implanon NXT among women who used Implanon NXT for three years

Reason*	N=52 N (%)
Desire for a long-acting method / not having to come to the clinic frequently	19 (36.5)
Experienced no side effects / problems with the implant	16 (30.8)
Feels “happy” / satisfied with the implant	23 (44.2)
Prevention of pregnancy / pregnancy related	
- To prevent pregnancy / does not desire children soon	9 (17.3)
- Feels “safe” from pregnancy when using implant	4 (7.7)
- Became pregnant / afraid of pregnancy with other contraceptives	2 (3.8)
Feels comfortable using the implant / feels the implant is convenient	4 (7.7)
Fear / dislike of injectable contraceptives	2 (3.8)
Other	4 (7.7)

* multiple responses allowed

Table 3: Reasons for not re-inserting Implanon NXT among women who used Implanon NXT for three years

Reason	N=39 N (%)
Experienced side effects on Implanon NXT*	14 (35.9)
Want to conceive	6 (15.4)
Not sexually active currently	2 (5.1)
Pregnant	1 (2.6)
Desires a permanent method	2 (5.1)
Want a break from contraceptives	2 (5.1)
Problems with accessing Implanon NXT removal	2 (5.1)
Did not have a problem with Implanon NXT but want a different method	9 (23.1)
Other**	1 (2.6)

* Side effects experienced were problems with amenorrhea (n=4), abnormal bleeding (n=4), weight gain (n=3), weight loss (n=1), headaches (n=1), acne (n=1)

** Told that the Implant can disappear inside the skin if you have it for too long

reinsert Implanon NXT, 13 (14.3%) chose injectables and 6 (6.6%) chose male condoms (Table 1). Overall, among all women (n=120) requesting removal of the implant, half (61, 50.8%) chose long-acting reversible contraceptives (IUDs and implants), a quarter (29, 24.2%) chose injectables or oral contraceptives, and approximately one in ten women (14, 11.7%) chose male condoms instead. Among women requesting removal of the implant prior to three years (n=29), a quarter (8, 27.6%) switched to male condoms, six (20.7%) to injectables, and five (17.2%) to oral contraceptives.

Among women who had used Implanon NXT for three years and chose to reinsert the implant following removal (n=52), the most frequent reasons for choosing to reinsert Implanon NXT were feeling happy or satisfied with the implant (23, 44.2%), and the desire for a long-

acting method or not having to return to the clinic frequently (19, 36.5%) (Table 2). Almost a third of women (16, 30.8%) chose to reinsert Implanon NXT because they experienced no side effects or problems with the implant. Reasons women reported for choosing to reinsert Implanon NXT included "it is taking care of me", being happy on the implant so "why change a winning formula" and it is "still my 100% first option".

Of the 39 women who had used Implanon NXT for three years, but chose not to reinsert Implanon NXT, six (15.4%) were planning to conceive, two (5.1%) were no longer sexually active and one (2.6%) was pregnant (Table 3). Just over a third of women (14, 35.9%) chose not to reinsert Implanon after three years due to side effects experienced which included amenorrhoea, abnormal bleeding and weight gain. A quarter (9, 23.1%) reported having no problems with Implanon NXT but wanted a different method. One woman reported she did not want to reinsert Implanon NXT because she was told that the implant can disappear inside the skin if it is used for a long duration. Women who did not reinsert Implanon NXT due to side effects (n=14) had chosen to use contraceptive methods which included injectables, IUDs and male condoms (Table 4). Reasons for choosing these methods frequently related to counteracting the side effects experienced on Implanon NXT, and most women who switched methods due to side effects had chosen injectables (5 of 14, 35.7%).

Among women who had requested removal of Implanon NXT prior to three years (n=29), approximately 20% (6, 20.7%) chose a contraceptive method (injectables or male condoms) because they had used the method previously or had no problems with prior use of the method (Table 5). Five women (17.2%) chose another method (oral contraceptives, tubal ligation or no method) due to wanting a "normal" or regular menstrual cycle or because they had problems with bleeding on the implant. The unavailability of injectables at clinics was the reason for four women (13.8%) choosing male condoms or oral contraceptives while awaiting stock of DMPA and Norethisterone Enanthate (NET-EN) at clinics. Only three (10.3%) women chose to use a long-acting method i.e. the IUD. Reasons for choosing the IUD included: wanting to try a new method, desire for a long-acting method, and wanting a method that the partner cannot see.

Overall, excluding women who had decided to reinsert Implanon (n=53) and those who chose to use no method (n=11), of the remaining women, 23 (23 of 56, 41.1%) women had switched to a method they had used previously. Methods previously used (n=23) included injectables (n=11), male condoms (n=10), and oral contraceptives (n=2). Of the 11 women who elected to use no contraceptive method, eight were no longer requiring contraception (not sexually active, pregnant or wanting to conceive). The remaining three women provided the following reasons for choosing to use no contraceptive method – the first wanted her menses to return as she had amenorrhoea on the implant, the second wanted a "normal" / regular menses as she had problems with bleeding on the implant, and the third was undecided on what method to use.

Discussion

Over half of the women who remained on Implanon NXT for three years, chose to reinsert the implant following removal. Reasons for reinserting the implant were frequently related to satisfaction using the implant, having no side effects and the desire for a long-acting method. In contrast, of the remaining women, about a third of women who remained on Implanon NXT for three years, chose not to reinsert due to side effects. Women who had requested early removal of the implant had reported a variety of factors that influenced contraceptive choice following implant removal that included prior use of the contraceptive method, having had problematic bleeding on Implanon NXT and desiring a "normal" or regular menses, and the unavailability of injectable contraceptives at the clinic.

Other studies have reported similar reinsertion rates following a three-year duration of Implanon use. Studies conducted in the United Kingdom and Spain found that approximately 60% of women elected to reinsert Implanon following removal[14,15]. A large multicentre randomized trial that compared implants to copper IUDs found a much higher rate of Implanon continuation among

Table 4: Reasons for choosing a different contraceptive method among women who did not reinsert Implanon NXT after three years due to side effects

Side effect on Implanon NXT	Method chosen	Reason for choosing this method
Amenorrhea (n=4)	2-month injectable	Wants to menstruate
	3-month injectable	Feels DMPA has a shorter duration compared to the implant and that she will menstruate when using DMPA
	Oral contraceptives	Wants to menstruate
	No method	Wants to menstruate
Abnormal bleeding (n=4)	3-month injectable	Had a "normal" menses on the 3-month injection and used it for 4 years previously
	3-month injectable	Feels it is an "easy" method to use, and it will not cause bleeding
	IUD	Wants a long-acting method so does not have to come to the clinic frequently
	IUD	Wants a long-acting method and wants to get her menses regularly
Weight gain (n=3)	Male condoms	Cannot use injectables because she has bleeding problems on injectables
	Male condoms	Wants to lose weight while using condoms and then reinsert Implanon NXT
	IUD	Wants a long-acting method that will not cause weight gain. Reports she gained 11kg on the implant, and the size of her clothes changed from a size 34 to size 38
Weight loss (n=1)	Male condoms	Wants to gain weight. Reports her clothes size changed from a size 42 to size 32 on the implant.
Headaches (n=1)	2-month injectable	Wants to try a new method and cannot use DMPA because she had gained weight on it previously
Acne (n=1)	Oral contraceptives	Hopes it will help with treating acne

616 women who remained on the implant for three years. Here, 78% of women continued using Implanon, either by removing and reinserting Implanon (101 of 236 users), or by consenting to off-label continued use of the implant for up to 5 years (n=381)[16]. However, none of these studies assessed reasons for implant continuation.

Of interest, among women who discontinued Implanon NXT after three years of use but were still desiring contraception (n=31), almost half (14 of 31, 45.2%) chose not to reinsert the implant due to side effects. This finding has clinical implications and contraceptive providers should be aware of this when providing information and counselling about contraceptive options. Furthermore, it highlights that side effects might not only lead to early removal of the implant but might influence contraceptive choice after three years. On the other hand, a quarter did not have any problems with the implant but instead wanted to use a different method, and this should be respected. Contraceptive services should be provided to women in a manner that is aligned with human rights guiding principles and this includes providing quality contraceptive services, providing women with information to allow them to make an informed decision about which contraceptive methods to use, and respecting each woman's wishes[17].

We found that among women who removed the implant early, contraceptive choice following removal was predominantly male condoms (27.6%), injectables (20.7%) and oral contraceptives (17.2%). Similarly, a study conducted in SA found that three quarters of women who removed Implanon NXT before three years chose to use another contraceptive, predominately DMPA-IM (36%) and oral contraceptives (26%)[8]. Overall, the contraceptive effectiveness of these methods is lower compared to implants, where only 0.05% of women are expected to experience an unintended pregnancy in the first year of use[18]. A study conducted in SA among adolescents using injectable and oral contraceptives found high rates of discontinuation and switching with only 40% of DMPA-IM users continuing at 1 year, and almost a quarter switching to another method[19].

Table 5: Reasons for contraceptive choice among women who requested removal of Implanon NXT prior to three years

Reason*	Contraceptive method chosen (N)**								N (%)
	3-month injectable	2-month injectable	Male condoms	IUD	Oral pills	Tubal ligation	Patch	No Method	N=29
Want to conceive								1	1 (3.4)
Pregnant								1	1 (3.4)
Want to try a new method				1	1				2 (6.9)
Wants a long-acting method				1					1 (3.4)
Privacy / my partner cannot see it				1					1 (3.4)
Comfortable with this method							1		1 (3.4)
Undecided on what method to use next								1	1 (3.4)
Used this method previously / did not have a problem when using this method previously	4	1	1						6 (20.7)
Others are using this method and are happy on it	1								1 (3.4)
I think I will not have side effects on this method			1						1 (3.4)
Prevents STIs and pregnancy			1						1 (3.4)
Want a non-hormonal method			1						1 (3.4)
To get a "normal" or regular period / because I had bleeding problems on Implanon NXT					3	1		1	5 (17.2)
Had no / reduced sex drive on Implanon NXT			1			1			2 (6.9)
No stock of DMPA / Net-EN so picked another method			3		1				4 (13.8)
Other			2						2 (6.9)

*multiple responses allowed

** one woman was advised by a healthcare provider to have Implanon NXT removed and reinserted prior to 3 years due to prolonged spotting

However, as Castle and Askew point out, not all discontinuations are necessarily problematic as discontinuations may occur because the method is difficult to use, or unacceptable to a woman or her partner, and then switching to a different method would be more suitable and effective[10]. A study among participants enrolled in an HIV prevention trial being offered a choice of contraceptives including LARC, found that over 50% of short acting reversible contraceptive users (injectables and oral contraceptives) had switched to a LARC[20]. This could be attributed to participant desire for a long-acting contraceptive method, as well increased access, and on-site provision of a range of contraceptive methods at no cost, along with quality counselling, including on method side effects.

Overall, we found that only three women desiring contraception had elected to use no method following Implanon NXT removal. This highlights the importance of starting the conversation about contraception, reproductive rights and choice with women. Once women are offered choice, the unmet contraceptive need can be significantly reduced. In busy contraceptive practices, little time might be spent counselling on contraceptive choice, and we found that women have different needs and preferences regarding contraceptive choice. Offering contraceptive choice counselling can also help to destigmatize contraceptive switching - clients are not always aware of their rights, and may be fearful of requesting an alternative method, and may stop using contraception as a result. Counseling which facilitates informed decision-making allows clients to express dissatisfaction and to explore options, and thereby contributes to improved method satisfaction and use.

Our study has some limitations. We collected limited information on reasons for contraceptive choice following Implanon NXT removal as this was a secondary objective of the study. We did not ascertain information on whether women who remained on the implant for three years but chose not to reinsert, were aware that implants could be removed earlier, or if they made previous attempts and experienced any barriers accessing removal. While we discuss the use of condoms as a primary contraceptive choice, we did not look at the use of condoms for dual protection (protection against pregnancy and sexually transmitted infections including HIV), therefore it is possible that condom use might have been higher than represented here.

Ethical Approval

Approval to conduct this study was obtained from the Human Research Ethics Committee at the University of the Witwatersrand, Johannesburg, South Africa (Reference: 170109) and from the KwaZulu-Natal Provincial Department of Health (Reference: HRKM 158/17). A letter of support from the public sector facility was also obtained.

Conclusion

Contraceptive implants are an important part of the contraceptive method mix in SA. Women find implants acceptable and many are willing to reinsert after three years. However, we must continue to offer women enhanced support to deal with side effects, combined with quality education and counselling, in order to encourage women to make an informed decision about which contraceptive methods they wish to use.

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Contribution of Authors

IB, JS, MB and MP conceptualised and designed the study. IB drafted the initial manuscript. IB, JS, MB, MP, CM and SLB all provided critical review and approval of the final manuscript.

Conflict of Interest

None.

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