

Giving information about the contraceptive implant using a DVD: is it acceptable and informative? A pilot randomised study

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ABSTRACT

Background To provide standardised information about the contraceptive implant (Nexplanon®), a digital video disc (DVD) was developed for use within a sexual and reproductive health (SRH) service in Edinburgh. The aim was to determine if the accuracy of information recalled after watching a DVD was comparable to that following a face-to-face consultation, and if patients found the use of a DVD acceptable.

Methods Fifty women attending an SRH service abortion clinic considering using Nexplanon for the first time agreed to be randomised to receive information about the implant either by (a) a DVD ($n=35$) developed using information taken from Faculty of Sexual & Reproductive Healthcare guidance or (b) a face-to-face consultation ($n=15$). A structured interview was conducted immediately following the DVD/face-to-face consultation and by telephone 3 months later. A small number of participants from each group attended for in-depth interview.

Results Knowledge recall (e.g. expected side effects) immediately following each intervention was similar in both groups. Most of the women who watched the DVD felt it was helpful (89%), easy to understand (94%) and acceptable (69%). Subsequently 76% of participants were contacted successfully at 3 months. The majority of those who had watched the DVD agreed that it had been informative (93%) and would be happy to receive contraceptive information via a DVD in future (93%).

Conclusions The use of a DVD to provide patient information on Nexplanon is acceptable and informative, and may enhance patient consultations. A large randomised controlled trial may determine if provision of quality standardised information via DVD can improve uptake or continuation rates of long-acting reversible methods of contraception.

Key message points

- The use of an audio-visual digital video disc (DVD) to provide patient information on the contraceptive implant is acceptable and informative and may enhance patient consultations.
- Women who watched the DVD felt it was helpful and easy to understand, and they would be happy to watch a DVD for information provision again.

INTRODUCTION

Unintended pregnancy is common. In Scotland in 2013 there were 11 777 therapeutic abortions¹ and around 30% of pregnancies are unplanned.² Most could have been prevented by use of effective contraception. Unlike other medical treatments (e.g. antihypertensive drugs, antibiotics) it is the individual user who chooses their contraceptive method. This choice is likely to be based on information received from friends, family or the media, just as much as from health professionals.³ The effectiveness of a contraceptive method is contingent upon its correct and continued use, and this is vitally dependent on its acceptability to the user. It seems logical that the provision of good-quality information about a contraceptive method and what might be expected during its use should improve both correct use and continuation rates; however, there is little evidence for this, and none from the UK.⁴

Providing detailed information about a contraceptive method takes time to do well, but for many health care providers



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consultation times are short. Health care providers have different levels of training and education and may place emphasis on different aspects of a contraceptive method. Furthermore, the content of the consultation may vary depending upon organisational factors such as whether the patient is the first or last to be seen that day. Consequently the quality of information women receive about a contraceptive method may be of variable quality, may sometimes be inaccurate, and may reflect the bias of the provider.

In NHS Lothian, the sexual and reproductive health service (SRH) has used digital video discs (DVDs) in the clinic for several years to provide information about vasectomy, intrauterine contraception and abortion. This ensures that patients receive accurate and standardised information in an audio-visual format. In a questionnaire survey of women requesting abortion who received information via DVD, women rated highly the content of the DVD and the acceptability of receiving information in this way.⁵ However, the effectiveness of a DVD for information giving, nor how it compares to a traditional face-to-face consultation for information provision, has not been formally evaluated.

To provide standardised, quality information about the contraceptive implant (Nexplanon[®]), a DVD was developed for use at Chalmers Sexual Health Centre SRH service, NHS Lothian. The information included on the DVD was taken from the Faculty of Sexual & Reproductive Healthcare Clinical Effectiveness Unit Guidance on contraceptive implants,⁶ and covered mode of action, insertion, removal, contraindications, risks and side effects. The DVD's content was agreed by clinicians working in the service and the DVD was made with technical assistance from the Medical Photographic Department, NHS Lothian. The DVD was piloted among stakeholders and minor modifications were made. The final version lasted 9 minutes. We conducted a pilot study that was designed to determine whether women found receiving information about Nexplanon via the DVD acceptable and informative. We wished to ascertain how the amount and accuracy of information recalled after watching a DVD compared to that following a face-to-face consultation with a clinician, and if the information given by either modality matched women's experience of Nexplanon following insertion.

METHODS

Recruitment

All women aged ≥ 16 years, attending Chalmers Sexual Health Centre from January to June 2013 for medical abortion, and considering using Nexplanon, were invited to participate. Following a routine consultation and after arrangements had been made for the abortion procedure, the clinician determined eligibility for Nexplanon, according to *UK Medical Eligibility Criteria for Contraceptive Use*.⁷ Exclusion

criteria included previous use of the contraceptive implant and the need for an interpreter during the consultation. A member of the research team provided further written and verbal information about the study before written consent was obtained from women agreeing to participate. Fifty women considering starting Nexplanon for the first time were recruited.

Interventions and randomisation

Participants were randomised to be given information about Nexplanon, either by DVD (35 women) or in a traditional one-to-one face-to-face consultation (15 women) with either a doctor or nurse (control group). Because this was a pilot study, a randomisation scheme allocating more participants to the intervention than the control group was chosen to improve the power in the intervention group without seriously affecting the power for between-group comparisons. A clinician provided women in the control group with information about Nexplanon according to their routine practice. Women randomised to the DVD watched it in the consultation room. When the DVD had finished, the clinician returned to the consulting room, thus providing an opportunity for women to ask any questions, and women wishing to undergo implant insertion were scheduled for this procedure following the abortion. Randomisation was done at the time of recruitment using sequentially numbered opaque sealed envelopes produced by a computer-generated randomisation sequence. Due to the nature of the intervention it was not possible to blind either the research team or the participant to the allocated intervention. Women were offered a £10 voucher if they were successfully contacted 3 months later for telephone interview.

Follow-up

Immediately following the consultation all women underwent a structured interview with a single researcher. A standard proforma was used to record demographic information, previous contraceptive use and what information the subject had gleaned from the consultation and its accuracy. The overall acceptability of the consultation was determined using a Likert⁸ scale to quantify descriptors including 'helpful', 'easy to understand' and 'confusing'.

Three months following the initial intervention all the study participants were contacted about participating in a short standardised telephone interview, lasting ≤ 5 minutes, conducted by the same member of the research team (LM). Three attempts at contact were made using the telephone numbers provided, at varying times of the day. Women were asked which contraceptive method they had chosen following the intervention. Women who had Nexplanon inserted were asked if the implant matched their expectations, particularly with respect to side effects and bleeding

patterns. All the women were asked about their experience of taking part in a randomised trial, and those in the DVD group were additionally asked about their experience of using a DVD as a means of receiving information.

Qualitative methods

At the time of the telephone interview all the women were invited to attend for a further in-depth interview with a member of the research team (LM or AJ), which was designed to explore in more detail their feelings about participating in a research study and the use of a DVD for information provision compared with a traditional consultation. Four women who watched the DVD and four who did not watch the DVD agreed to attend. A topic guide was used to structure each interview, based on the key areas described above. Women were offered a £20 voucher if they attended for in-depth interview. Interviews were conducted between May and August 2013 at Chalmers Sexual Health Centre, and lasted approximately 30 minutes. Interviews were audio-recorded and transcribed verbatim. Data were organised by cross-sectional indexing. After all the interviews had been conducted the data were analysed using thematic analysis.⁹

Statistics

A sample size of 35 subjects was allocated to the DVD group to allow estimation of percentage rates of acceptability and recall to within a standard error of around 8%. The power for the randomised comparison to 15 controls is low, but sufficient to give a high chance of detecting a statistically significant major difference between the two groups of the order of 40%. The allocation of unequal numbers of participants to the two groups was to improve the power for estimation within the DVD group without greatly decreasing the power for the between-group comparisons. All the data, including demographic data recorded at recruitment and at telephone follow-up, were coded and entered onto a Microsoft Excel™ database by LM and checked by AJ. Descriptive statistics were obtained including means and standard deviations (SDs). Rates of acceptability and recall in both groups were calculated. Comparisons were made using Chi square (χ^2) tests or Fisher's exact test where appropriate counts within individual cells of the contingency table fell below a value of five. Statistical significance was deemed to be $p < 0.05$.

Ethical approval

The Scotland A Research Ethics Committee (12/SS/0075) approved the study in May 2012.

RESULTS

Only 8/58 women asked to participate declined, giving a recruitment rate of 86%. Seven women had no time to participate, while one declined as she did

not wish to be randomised to watch the DVD. The mean age of participants was 24 (SD 5.5) years. Thirty-five women were recruited to the DVD arm of the study and 15 to the control arm. There were no statistically significant demographic differences between the two groups (Table 1).

Immediately following either the DVD viewing or the face-to-face consultation all the women were asked four multiple-choice questions to test information recall. Recall was similar in both groups in response to three of the questions (Table 2); however, respondents in the control group incorrectly expected mood and/or skin changes to be common side effects with Nexplanon compared to respondents in the DVD group.

All the participants were asked if they intended to proceed to implant insertion after the abortion procedure; 43 (86%) women stated that they did [30 (86%) and 13 (87%) in the DVD and control groups, respectively]. The remainder was uncertain, and no woman definitely decided not to have Nexplanon inserted. DVD participants were asked to respond to a series of statements relating to the DVD itself. Thirty-one (89%) women agreed it was helpful, 33 (94%) agreed it was easy to understand and 24 (69%) felt it was an acceptable way in which to receive information compared to a face-to-face consultation. Thirty-four (97%) women disagreed that the DVD was confusing, and only one felt neutral. Asked to

Table 1 Demographics of women recruited for the study

Demographic	DVD group (n=35)	Control group (n=15)
Age (years)		
Mean (SD)	24 (5.3)	23 (5.9)
Range	16–36	17–34
DepCat Score* [n (%)]		
1–2 (Affluent)	3 (9)	1 (7)
3–5 (Moderate)	25 (71)	13 (87)
6–7 (Deprived)	7 (20)	1 (7)
Smoker [n (%)]		
No	19 (54)	10 (67)
Current	13 (37)	4 (27)
Ex	3 (9)	1 (7)
Previous birth [n (%)]	12 (34)	5 (33)
Previous abortion [n (%)]	11 (31)	3 (20)
Previous contraception use [n (%)]		
None	2 (6)	0
Condoms	32 (91)	14 (93)
Combined (pills/patch)	26 (74)	14 (93)
Progestogen-only pill	11 (31)	0
Contraceptive injection	3 (9)	1 (7)
Intrauterine method	2 (6)	1 (7)

*The DepCat Score is a marker of deprivation in Scotland based upon postcode area of residence, scoring from 1 (least deprived) to 7 (most deprived).¹⁵

DVD, digital video disc; SD, standard deviation.

Table 2 Responses to questions relating to information recall

Question responses	DVD group [n (%)]	Control group [n (%)]	p
Q1: Length of licence limit of implant?			
1 year	0	0	1.0
3 years	33 (94)	15 (100)	
5 years	2 (6)	0	
Q2: The implant works by inhibiting ovulation?			
Yes	28 (80)	11 (73)	0.63
No	1 (3)	0	
Uncertain	6 (17)	4 (27)	
Q3: Common side effects to expect with implant?			
Weight gain	6 (17)	5 (33)	0.27
Irregular bleeding	29 (83)	15 (100)	0.16
Amenorrhoea	28 (80)	14 (93)	0.41
Mood or skin changes	2 (6)	8 (53)	0.0004
Q4: There can be a delay in return to fertility?			
Yes	14 (40)	2 (13)	0.17
No	15 (43)	10 (67)	
Uncertain	6 (17)	3 (20)	

Bold figure denotes significance.

DVD, digital video disc; Q, question.

rate the usefulness of the information that they had received via the DVD on a scale from 0 (least useful) to 10 (most useful), responses ranged from 5 to 10, with a mean score of 9 out of 10.

Thirty-eight (76%) women were successfully contacted and interviewed 3 months later, 27 (77%) from the DVD group and 11 (73%) from the control group. There were no statistically significant demographic differences between the women interviewed and those not. Of those women with no completed follow-up at 3 months, one no longer lived in the UK, two had an incorrect number documented on their contact sheet, two answered but declined to proceed with the interview and seven had no answer after

three attempts. The mean time to telephone interview from recruitment was 92 (SD 3.9, range 88–104) days (i.e. 13 weeks). Of those women completing telephone follow-up, 34 (89%) had an implant inserted, 25 (93%) and nine (82%) in the DVD and control groups, respectively. A further two women in the DVD group stated they still intended to get the implant fitted at a later date, and two in the control group stated they had changed their mind due to concerns about using a 'foreign object' ($n=1$) or concern about possible bleeding patterns ($n=2$). While nine (26%) women remained happy with their implant, 10 (29%) were uncertain about it, eight (26%) were having some problems and seven (21%) were unhappy (Table 3). Women who experienced side effects were asked if the information received had led them to expect these side effects. Over 60% of those experiencing side effects in the DVD group stated that they did not expect to experience side effects to this extent, while the majority (83%) of women in the control group did, although this difference did not reach statistical significance (Table 3). Side effects described included bleeding problems (15), mood changes (8), concern about amenorrhoea (1), pain/irritation at the site of implant insertion (2) and skin changes (1). By 3 months' follow-up, five (20%) women in the DVD group who had Nexplanon fitted had already had the implant removed, while all nine women in the control group continued to use Nexplanon. This difference was not statistically significant ($p=0.29$). Women in the DVD group were again asked about their experience; 27 (93%) agreed that the DVD was informative and that they would be happy to use a DVD for information provision again. Two (7%) women disagreed with these statements.

In-depth interviews

One of the four women in the control group failed to attend; consequently three in-depth interviews were conducted in the control group, and four in the intervention group. All seven respondents still had Nexplanon *in situ* at the time of the interview.

Table 3 Women's experience of the implant at 3 months' follow-up

Experience	DVD group (n=25) [n (%)]	Control group (n=9) [n (%)]	p
Happy with implant	6 (24)	3 (33)	0.09
Uncertain about implant	6 (24)	4 (44)	
Having some problems with implant	6 (24)	2 (22)	
Not happy at all with implant	7 (28)	0	
If side effects experienced, do they meet expectations from information provided?			
Yes	7 (37)	5 (83)	
Not to the extent I have experienced	9 (47)	0	
No, not at all (n=women in whom side effects present)	3 (16) (n=19)	1 (17) (n=6)	

DVD, digital video disc.

Box 1 In-depth interview quotes: positive feedback from digital video disc (DVD) group

"I think it covered everything and it was good because it mentioned loads of other things."

"I was happy with the DVD. I would say it covered everything so I am quite happy with it."

The respondents in both groups generally viewed the information provided to them, either by DVD or via face-to-face consultation, as sufficient. All four respondents who watched the DVD thought it was useful and helpful as a means of information provision (Box 1). However, there also seemed to be consensus that a DVD could not entirely replace a traditional consultation, as women also valued the opportunity to ask questions of someone face-to-face (Box 2). Some suggestions were made about improving the DVD, including the inclusion of endorsements from women who have already used an implant and the use of graphics to demonstrate insertion and mechanism of action. All the respondents felt that having the DVD available to watch via a website would be useful (Box 3).

All the respondents expressed positive views about participating in clinical research and all would agree to do so again if asked. Respondents appeared to have no concerns with the concept of being randomised and understood the purpose of it.

DISCUSSION

This pilot study demonstrates that using a DVD to provide information about the contraceptive implant is both acceptable and informative. The majority of participants who watched it felt that the DVD was both helpful and easy to understand, and rated it highly with a mean score of 9 out of 10 points for usefulness. Although information recall was similar for both the DVD and control groups, more women in the control group incorrectly thought that side effects comprising mood/skin changes were common.

Box 2 In-depth interview quotes: possible disadvantages to digital video disc (DVD) use

"I thought it was quite good. I have to say I don't think I was taking it all in. Some information to take away would be ideal; something to think about later if you had questions because the DVD doesn't give you the opportunity to ask questions there and then." [DVD group]

"You don't have the option to ask someone face-to-face if you have any questions." [Control group]

Box 3 In-depth interview quotes: suggestions for further development

"Maybe getting some other people's comments instead of just showing the demonstration and talking about it. To get some different ages of women and girls commenting on how it's affected them personally and how it's benefited them." [DVD group]

"I think it would be a great idea. It would make it really accessible and people could go back time and time again if they had something else they wanted to know or if they wanted to double check something." [DVD group – regarding use of a DVD on a website]

This highlights the variation in counselling that can occur in face-to-face consultations. The majority of respondents in the DVD group, when asked at follow-up 3 months later, stated that they would be happy to watch a DVD for information provision again. Participants from both groups who returned for in-depth interview were happy with the quality of information provided to them at their initial consultation, and those who watched the DVD felt it was useful and helpful. Previous research on the use of a DVD to provide information about abortion to women had similar findings, namely that women rated receiving information via DVD highly.⁵ Some sexual health services have adopted the use of DVDs routinely, and have reported that men find this preferable to attending an outpatient appointment for vasectomy pre-operation counselling.¹⁰

While research relating to the use of a DVD in contraceptive counselling is limited, the use of 'apps' providing information about contraception, including long-acting reversible contraception (LARC), that patients can access via a smartphone or tablet computer prior to a consultation, have proved acceptable for information provision, and may increase knowledge and interest in effective forms of contraception.^{11 12} Similarly, a computer-based contraceptive assessment module, with the use of additional specifically tailored health materials, may positively influence contraceptive choice and potentially improve contraceptive continuation and adherence.^{13 14}

Our qualitative research revealed some possible factors to consider if producing DVDs for patient information provision. The inclusion of endorsements from women who have previously used the contraceptive method may aid decision-making. The use of case studies showing other patients' experiences was well liked by men who used a DVD for vasectomy counselling.¹⁰ The use of animated graphics demonstrating the mode of action of contraceptive methods and, where relevant, insertion and removal procedures,

may also be helpful (but expensive to produce). It was clear that women appreciate having the opportunity to ask questions of health professionals, and to have information provided to them to take away to read, or possibly watch, later. It is not our intention that DVDs should replace face-to-face consultations completely, rather they could enhance these. A health provider will always be required to issue the chosen method of contraception thus allowing questions to be asked, but after watching a DVD or similar technology the resultant questions should be better informed and more focused. The concept of having DVDs available to watch on a relevant website, either before or after a consultation, was welcomed by women in our study.

There are limitations to this pilot study, namely the select population that we recruited from and the small number of participants. We chose to recruit women attending a clinic for abortion, as this is a time when counselling about contraceptive use, and particularly encouraging the use of LARC methods, is vitally important. Although the sample was small, we did achieve a high recruitment rate, and our aim in this small pilot study was to determine if using a DVD for information provision was feasible and acceptable, with a view to considering initiating a larger multicentre study at a later date. Neither the research team nor the study participants were blinded to the intervention to which they were randomised. Women requiring an interpreter were excluded from participation, which did of course eliminate a segment of the population. In any further larger-scale studies it would be important to consider producing DVDs in languages other than English, although this would be expensive.

This pilot study has shown that the use of audio-visual DVDs to provide patient information about the contraceptive implant is acceptable and informative, and can be used to enhance face-to-face patient consultations rather than replace them altogether. A large-scale randomised controlled trial is now needed to determine if provision of quality standardised information via DVD can improve uptake and/or continuation rates of LARC and save time during consultations, a factor that we did not evaluate.

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