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# Effects of a mobile phone-based intervention to increase post-abortion family planning



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## Introduction

- Post-abortion family planning (PAFP) is important to reduce subsequent unintended pregnancies
- There is limited evidence for mobile phone-based interventions (mHealth) to increase contraception use
- Our formative research indicated that only 40% of women adopted effective PAFP (pill, intra-uterine device, implant, or injectable) at Marie Stopes International (MSI) Cambodia clinics
- The objective of the MOBILE Technology for Improved Family Planning (MOTIF) trial was to assess the effects of a mHealth intervention to support PAFP in Cambodia

## Methods

- 500 women seeking safe abortion services at four MSI Cambodia clinics that reported not wanting to be pregnant were randomly allocated to the MOTIF (Panel 1), or to a control group. Researchers were masked to treatment allocation
- The primary outcome was self-reported use of effective contraception at four months post-abortion. Analyses were by intention to treat
- Effect measures were risk ratios and hazard ratios with 95% confidence intervals
- We assessed contraceptive discontinuation using Kaplan Meier survival analysis techniques
- The study is registered with ClinicalTrials.gov, NCT01823861.

### MOTIF counsellors & information card given to participants



#### Panel 1: MOTIF intervention

The MOTIF intervention comprised six automated voice-messages (using the open-source programme 'Verboice') to participants' mobile phones over the three-month post-abortion period; one message every two-weeks. The main message, recorded in the Khmer (Cambodian) language, was as follows:

*'Hello, this is a voice message from a Marie Stopes counsellor. I hope you are doing fine. Contraceptive methods are an effective and safe way to prevent unplanned pregnancy. I am waiting to provide free and confidential contraceptive support to you. Press '1' if you would like me to call you back to discuss contraception. Press '2' if you are comfortable with using contraception and you do not need me to call you back this time. Press '3' if you would prefer not to receive any messages again'*

Clients who pressed '1', or who did not respond, received a phone call from a counsellor providing individualised support on a range of contraceptive methods.

## Results

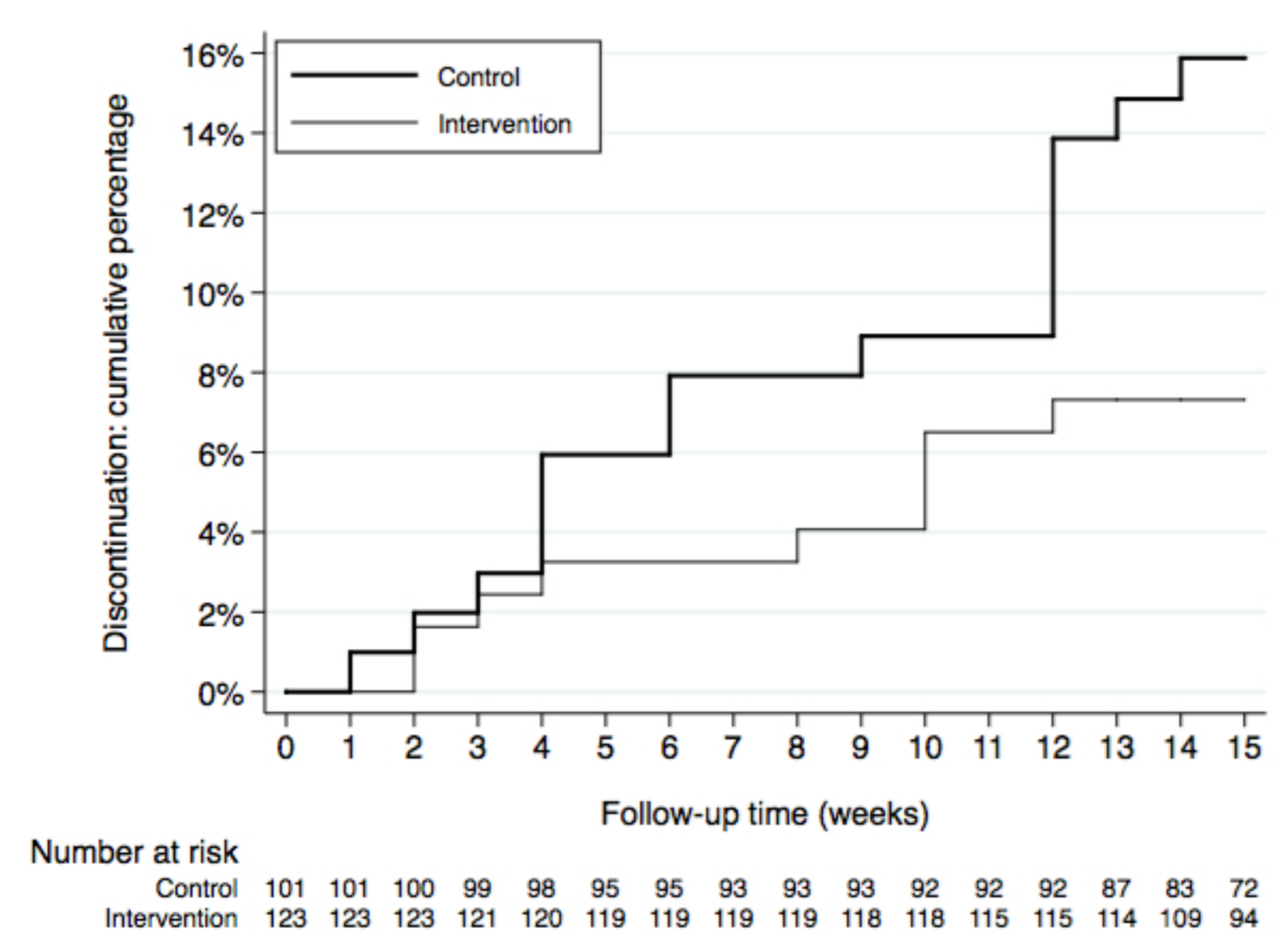
- 500 participants were randomised; 249 to the intervention and 251 to the control group
- Primary outcome data were available for 431 (86.2%) participants
- Self-reported effective contraception use at four months was increased by 39% with the MOTIF intervention (Table 1)
- Similar results were obtained when we considered participants lost to follow-up as non-users of contraception; RR 1.35 (1.12-1.63); p=0.002
- There was weak evidence of reduced discontinuation amongst participants that started effective PAFP during the first four weeks post-abortion (Figure 1)

Table 1: Primary and secondary outcomes

	Intervention group n(%)	Control group n(%)	Relative Risk (95% CI)*	p value
<b>Primary outcome</b>				
Self-reported use of effective PAFP at 4-months	135 (64.0%)	101 (45.9%)	1.39 (1.17-1.66)	<0.001
<b>Secondary outcomes</b>				
Long-acting contraception use at 4-months	61 (28.9%)	19 (8.6%)	3.35 (2.07-5.40)	<0.001
Contraceptive discontinuation	9 (7.3%)	16 (15.8%)	0.45 (0.20-1.01)	0.053
Pregnancy	6 (2.9%)	5 (2.3%)	1.25 (0.39-4.06)	0.701
Repeat abortion	2 (1.0%)	1 (0.5%)	2.10 (0.19-22.9)	0.535
Involvement in road traffic accident	0 (0%)	0 (0%)		
Domestic abuse	0 (0%)	0 (0%)		

\*Hazard ratio for contraceptive discontinuation

Figure 1: Contraceptive discontinuation



## Conclusions

- The MOTIF intervention significantly improved use of effective contraception at four months post-abortion, in particular long-acting methods
- Additional mobile phone-based support for PAFP should be considered in addition to existing abortion care services.



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**Study protocol:** Smith C et al. MOBILE Technology for Improved Family Planning services (MOTIF): study protocol for a randomised controlled trial. *Trials*. 2013;14(427):1-9

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