

Success and failure of SMS reminders in a populational-based colorectal cancer screening program (M-TICS study)

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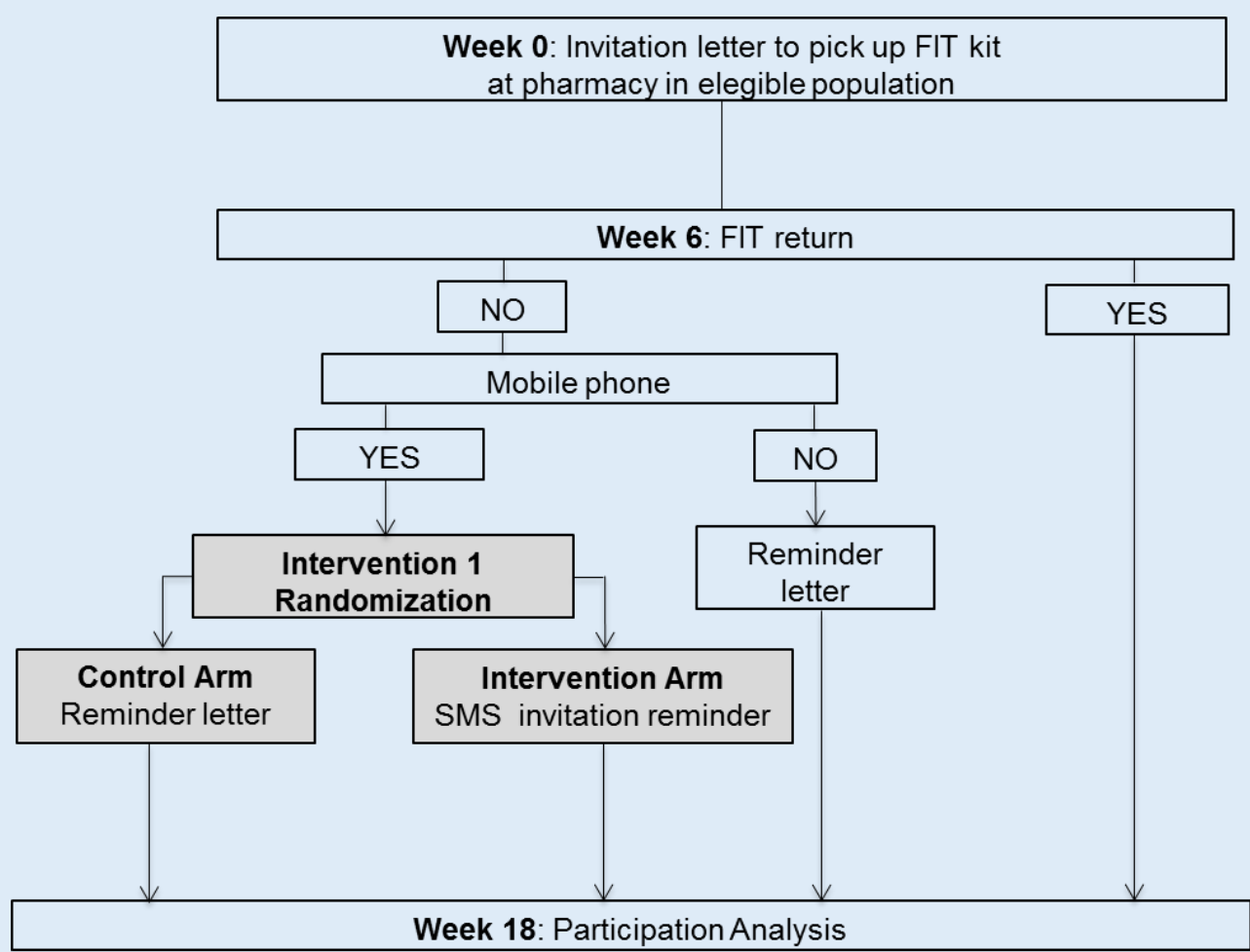
INTRODUCTION



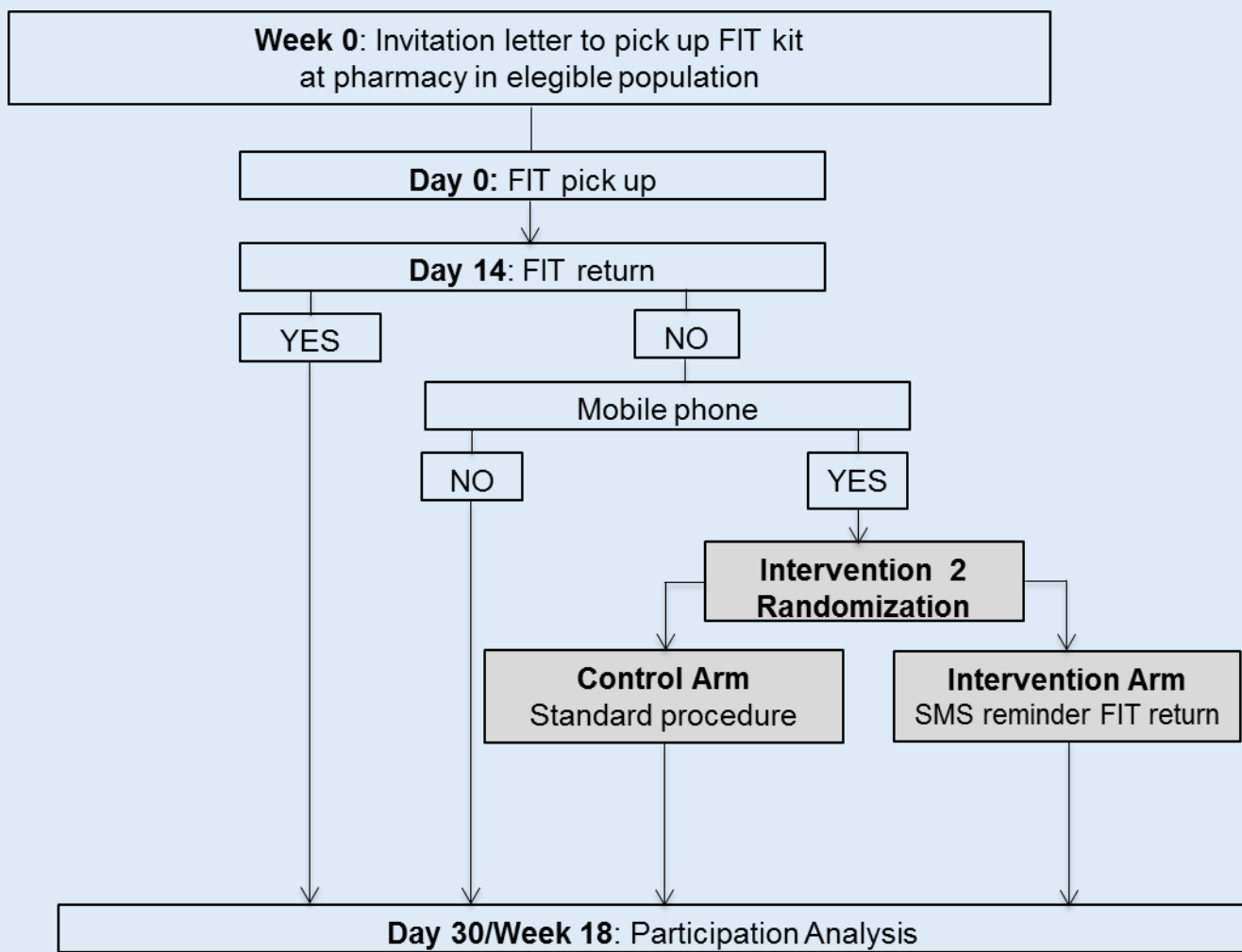
Mobile phone text message reminders to increase colorectal cancer (CRC) screening participation has shown promising results. The M-TICS study is a randomized trial aimed to assess the effectiveness of SMS-based interventions to increase participation in the current colorectal and breast cancer screening programs of the Metropolitan Area of Barcelona, Spain. This study focuses on screening invitation reminders in a pharmacy-based CRC screening program.

METHODS

Intervention 1: A reminder (SMS vs. letter) sent six weeks after initial invitation for non-participants



Intervention 2: An SMS reminder to complete and return FIT



The primary outcome was FIT completion rate (participation) within 126 days from invitation or from FIT pick-up in interventions. A survey assessed acceptability and appropriateness of the FIT reminder.

RESULTS

- Intervention 1 (invitation reminder) was discontinued early because of a lower rate of participation (5.7 percentage points) in the SMS arm compared to letter arm.

A total of 24,208 individuals were enrolled between May 2022 and September 2022. The interim analysis included 5,722 individuals who completed 126 days of follow-up since the invitation. There was a significant reduction in the participation rate in the SMS arm compared with the letter arm (16.4% vs 22.2%, RR 0.73, 95% CI 0.65–0.84).

- Intervention 2 (FIT reminder): In total, 9,369 invitees who picked up a FIT kit at the pharmacy but did not return it after 14 days were randomised in a 1:1 ratio to receive either an SMS reminder or no reminder. FIT completion rate was 77.7% in the control arm and 82.6% in SMS arm. Higher participation rates in the SMS arm were observed independent of sex, age, socioeconomic level, and screening history.

CONCLUSIONS

- Replacing a letter reminder by an SMS reminder in the non-participating population did not work. An in-depth analysis and retest of Intervention 1 are required to identify its shortcomings. Diverse factors would need to be redefined, such as the current pathway that requires individuals to have a printed letter to receive the FIT at pharmacies. Other methods related to the timing and frequency of the SMS messages should also be tested.
- Adding an SMS reminder to the standard procedure significantly increased FIT kit return rates and was considered acceptable and appropriate. This intervention targeted individuals who had already shown an interest in getting screened. The impact on the overall program participation rate was moderate, considering that this subgroup represents only 9% of the target population.

FUNDING

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Acceptability and appropriateness of receiving an SMS notification from the screening program

	Intervention (n=211) %	Control (n=204) %	All (n=415) %
Would you like to receive any SMS notifications from the CRC screening programme?			
Yes	87,2	83,3	85,3
No	0,0	2,5	1,2
Indiferent	12,8	14,2	13,5
Do you think it would be useful to receive an SMS to remind you to return the test to the pharmacy?			
Yes	94,3	91,4	92,9
No	5,7	7,5	6,6
Indiferent	0,0	0,5	0,3
Missing	0,0	0,5	0,3
How would you prefer to be reminded to return the test, by letter or SMS?			
SMS	90,7	84,9	87,9
Letter	3,6	7,0	5,3
Indiferent	4,6	6,5	5,5
No reminder	1,0	0,5	0,8
Do not know	0,0	1,1	0,5
Have you recently received a reminder to return the FIT kit at the pharmacy?			
Yes, an SMS	62,6	2,9	33,3
Yes, a letter	10,9	10,3	10,6
No	22,7	83,3	52,5
Don't remember	3,8	2,5	3,1
Missing	0,0	1,0	0,5
Was the content of the message you received clear?*			
Yes	100,0		33,0
No	0,0		0,0
Don't remember	0,0		0,2
Did you understand what you had to do?*			
Yes	100,0		33,0
No	0,0		0,0
Don't remember	0,0		0,2

\*Only for individuals who reported receiving a reminder (n=132)