

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

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INTRODUCTION

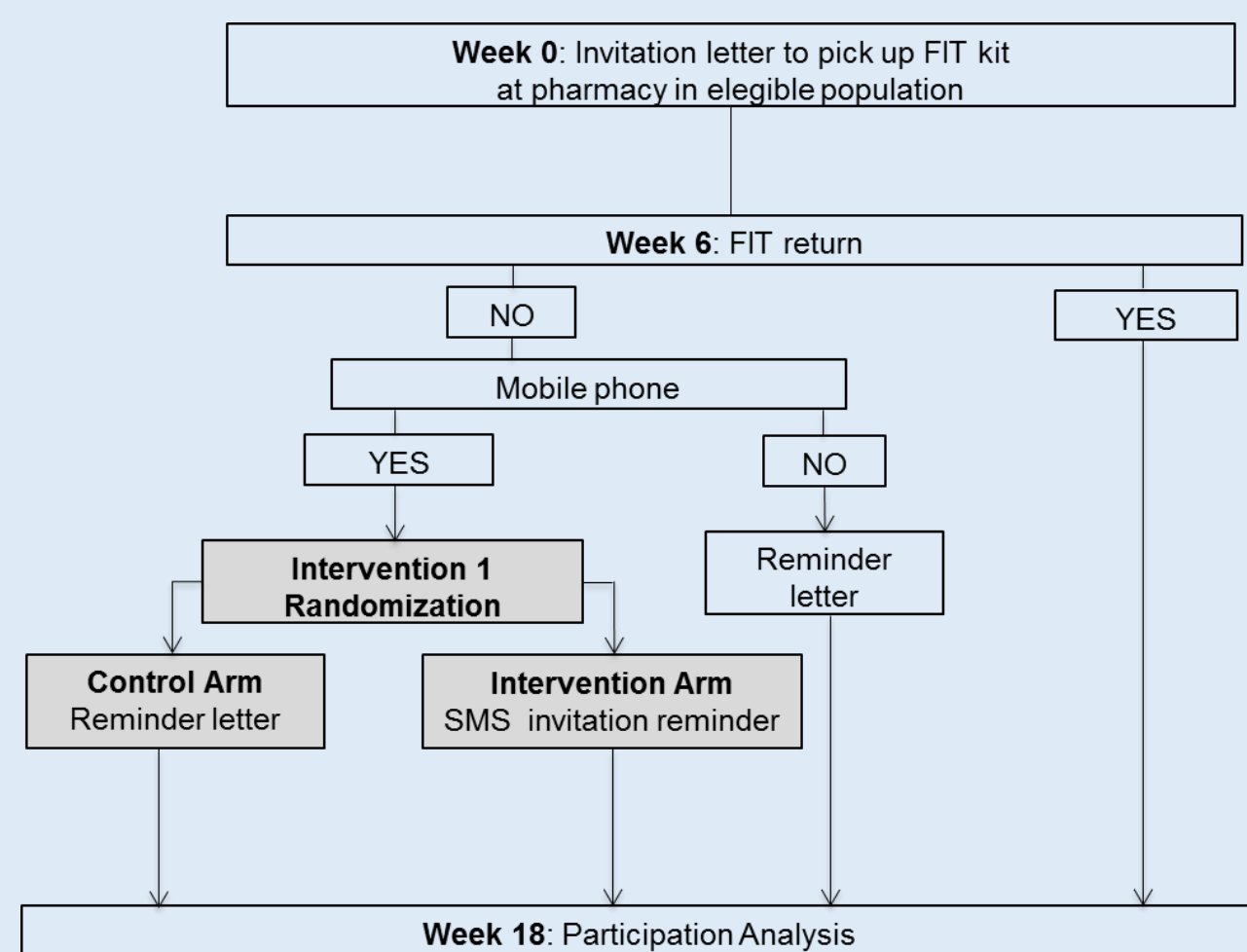


Mobile phone text message reminders to increase colorectal cancer (CRC) screening participation has shown promising results.

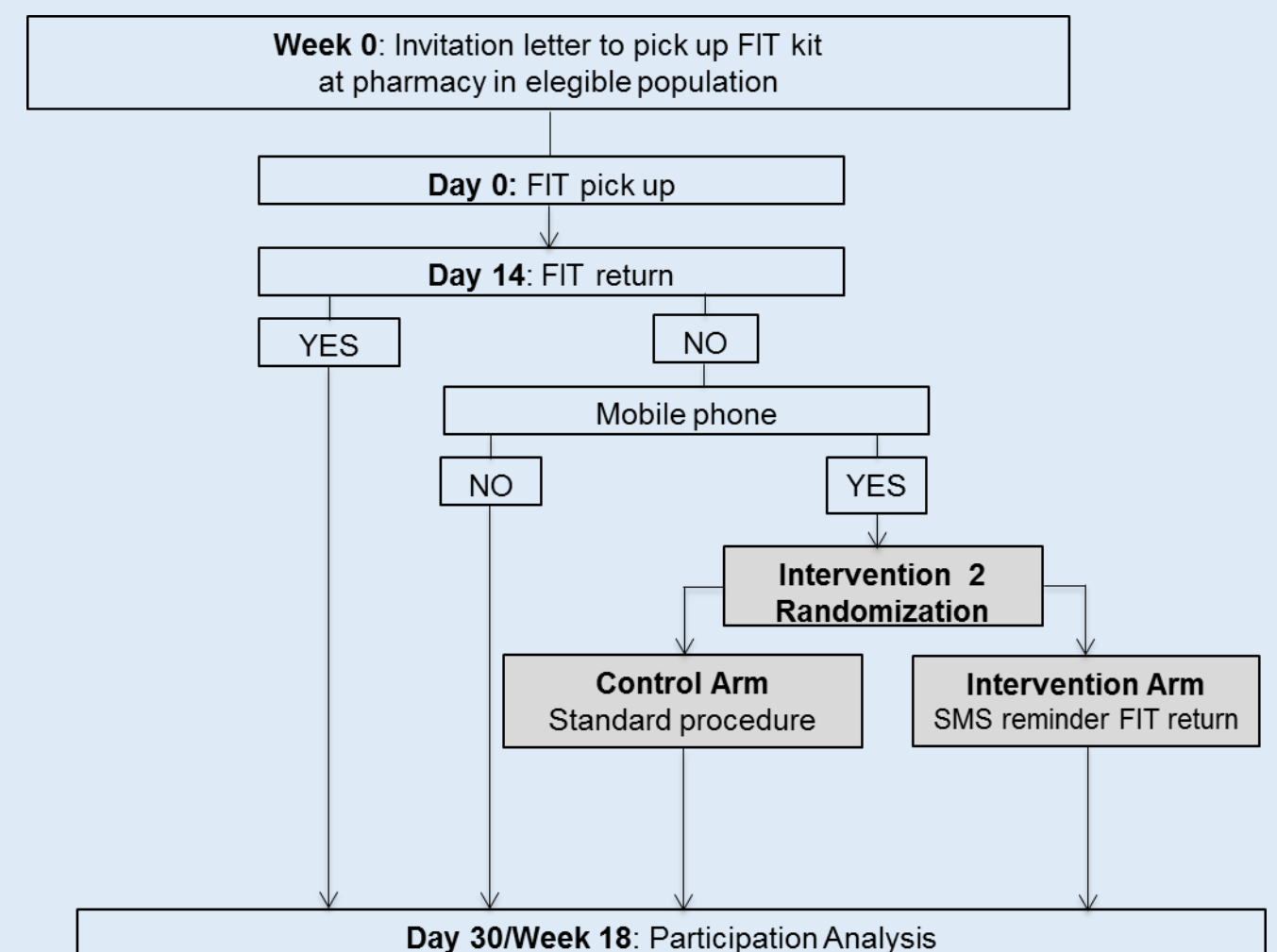
The M-TICS study is a randomized trial aimed to assess the effectiveness of SMS-based interventions to increase participation in the current colorectal and breast cancer screening programs of the Metropolitan Area of Barcelona, Spain. This study focuses on screening invitation reminders in a FIT-based 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 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).

In intervention 2, FIT completion rate was 77.7% in the control arm and 82.6% in SMS arm. Higher participation rates in the SMS arm were reported independent of sex, age, socioeconomic level, and screening profiles.

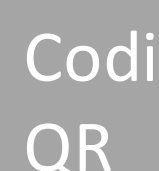
CONCLUSIONS

SMS-based interventions have the potential to increase participation even though the SMS invitation reminder did not work. A more in-depth evaluation is needed to determine where the intervention failed to correct and retest this intervention, such as shortening the time to send the reminder, sending more than one SMS, or modifying its content.

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FUNDING

This study has been funded by Instituto de Salud Carlos III through the project PI19/00226 (Co-funded by European Regional Development Fund. ERDF, a way to build Europe). We thank CERCA Programme/Generalitat de Catalunya for institutional support.



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

	Intervention (n=211)		Control (n=204)		All (n=415)	
	n	%	n	%	n	%
1. Would you like to receive any SMS notifications from the CRC screening program?						
Yes	184	87.2	170	83.3	354	85.3
No	0	0.0	5	2.5	5	1.2
Indifferent	27	12.8	29	14.2	56	13.5
2. Do you think it would be useful to receive an SMS to remind you to return the test to the pharmacy?						
Yes	183	94.3	170	91.4	353	92.9
No	11	5.7	14	7.5	25	6.6
Indifferent	0	0.0	1	0.5	1	0.3
Missing	0	0.0	1	0.5	1	0.3
3. How would you prefer to be reminded to return the test by letter or SMS?						
SMS	176	90.7	158	84.9	334	87.9
Letter	7	3.6	13	7.0	20	5.3
Indifferent	9	4.6	12	6.5	21	5.5
No reminder	2	1.0	1	0.5	3	0.8
Do not know	0	0.0	2	1.1	2	0.5
4. Have you recently received a reminder to return the FIT at the pharmacy?						
Yes, an SMS	132	62.6	6	2.9	138	33.3
Yes, a letter	23	10.9	21	10.3	44	10.6
No	48	22.7	170	83.3	218	52.5
Don't remember	8	3.8	5	2.5	13	3.1
Missing	0	0.0	2	1.0	2	0.5
5. Was the content of the message you received clear?						
Yes	132	100.0				
No	0	0.0				
Don't remember	0	0.0				
6. Did you understand what you had to do?						
Yes	132	100.0				
No	0	0.0				
Don't remember	0	0.0				