

Use of text message reminders to improve uptake in a population-based breast cancer screening program, Catalonia (Spain)

Montse Garcia¹, Llúcia Benito¹, Carmen Vidal¹, Josep M. Borràs², Víctor Moreno¹

1. Cancer Prevention and Control Program, Catalan Institute of Oncology, IDIBELL, L'Hospitalet (Spain); 2. Catalan Cancer Plan, Catalan Health Department, L'Hospitalet (Spain)

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Generalitat de Catalunya
Departament
de Salut



ICO
Institut Català d'Oncologia



**Programa de detecció precoç
del càncer de mama**

Background

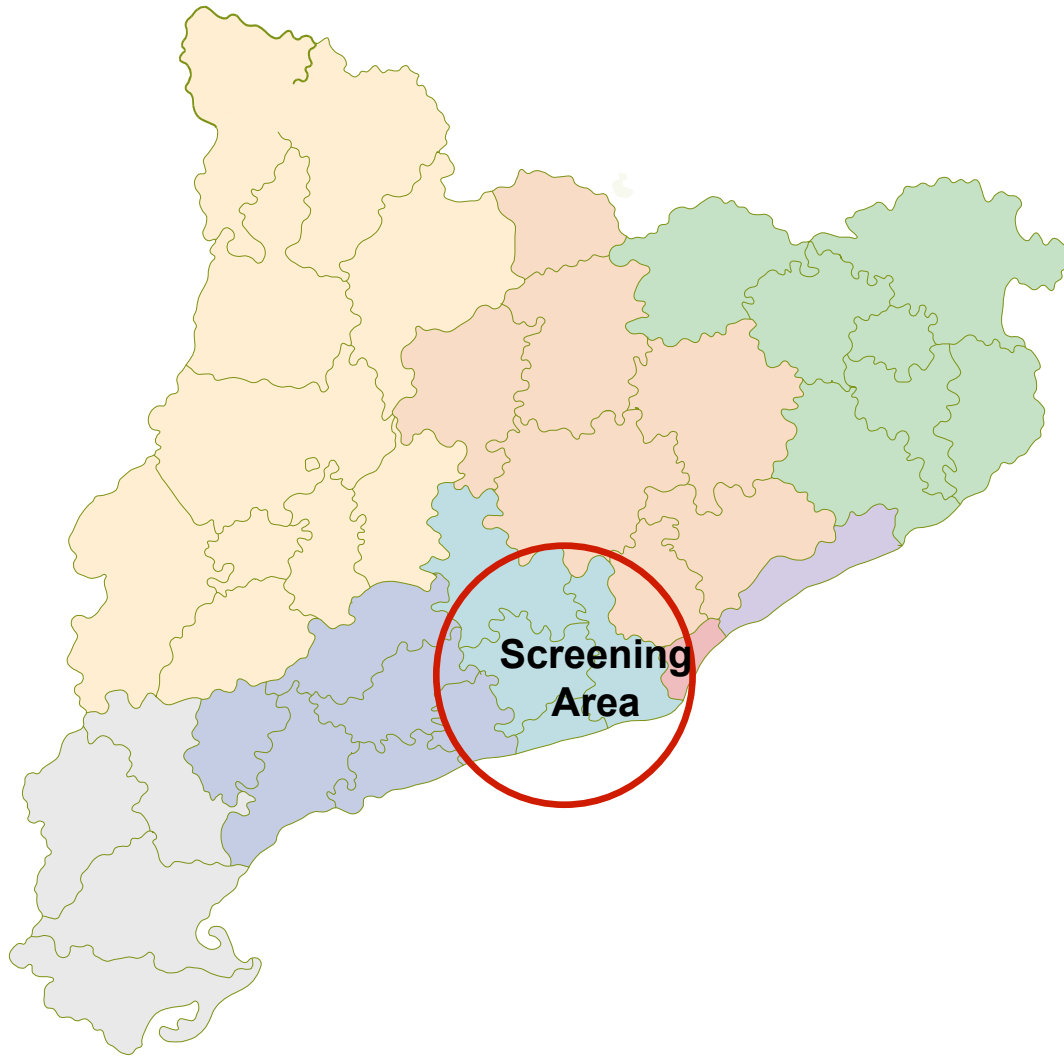
Non-attendance for routine screening appointments

- 1) results wasted resources
- 2) disturbs the planned work-schedules
- 3) impacts patient outcomes because of missed opportunities for diagnosis and treatment.

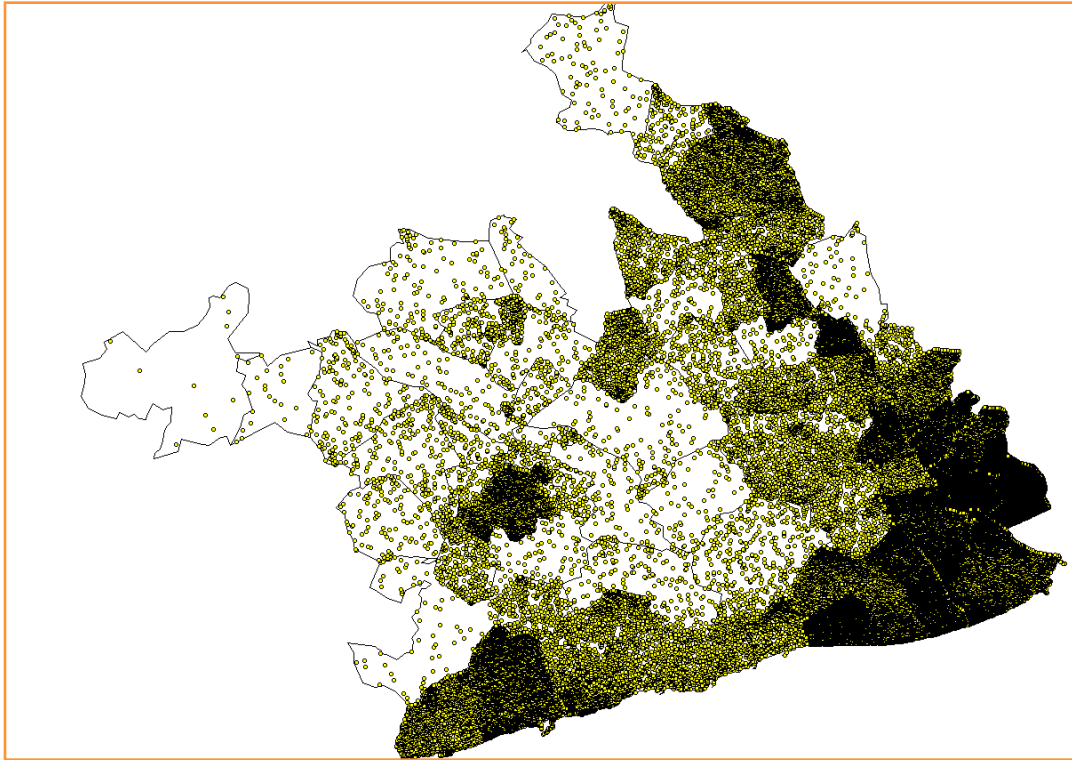
Objective

- To analyze the effect of a mobile text message service reminder on the uptake of screening mammogram in Catalonia, Spain.





- A biennial screening program for breast cancer addressed to women aged 50-69 years who lived in the area (n= 171,000).
- BCSP is located in Catalonia, a region in the north-east of Spain

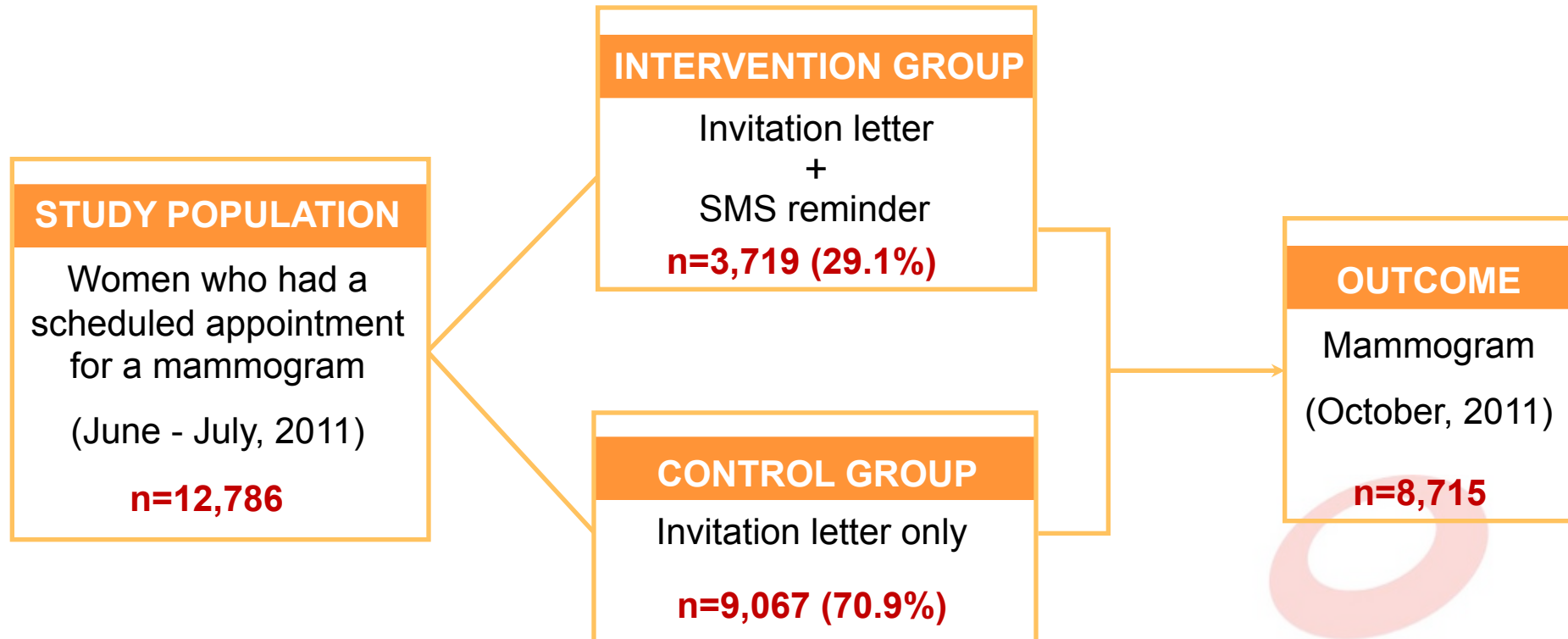


Population density (people per km²)



Methods

Screening procedure Study Population Data collection & analysis



Variables

- **Dependent:** Timely participation in the Breast Cancer Screening Program (mammogram)
- **Independent:**
 - Age group:
 - 50-59 years,
 - 60-69 years
 - We recoded the variable 'screening units' according with the population growth from 2003 to 2010 and rurality (%) of the municipalities to assess 'accessibility':
 - Easily-to-reach areas
 - Hard-to-reach areas
 - Screening behavior:
 - [Previously] Unscreened: women who had never had a prior mammogram
 - [Previously] Screened: women with at least one prior mammogram

Analysis

- Multivariate logistic regression models

Are SMS reminders effective?

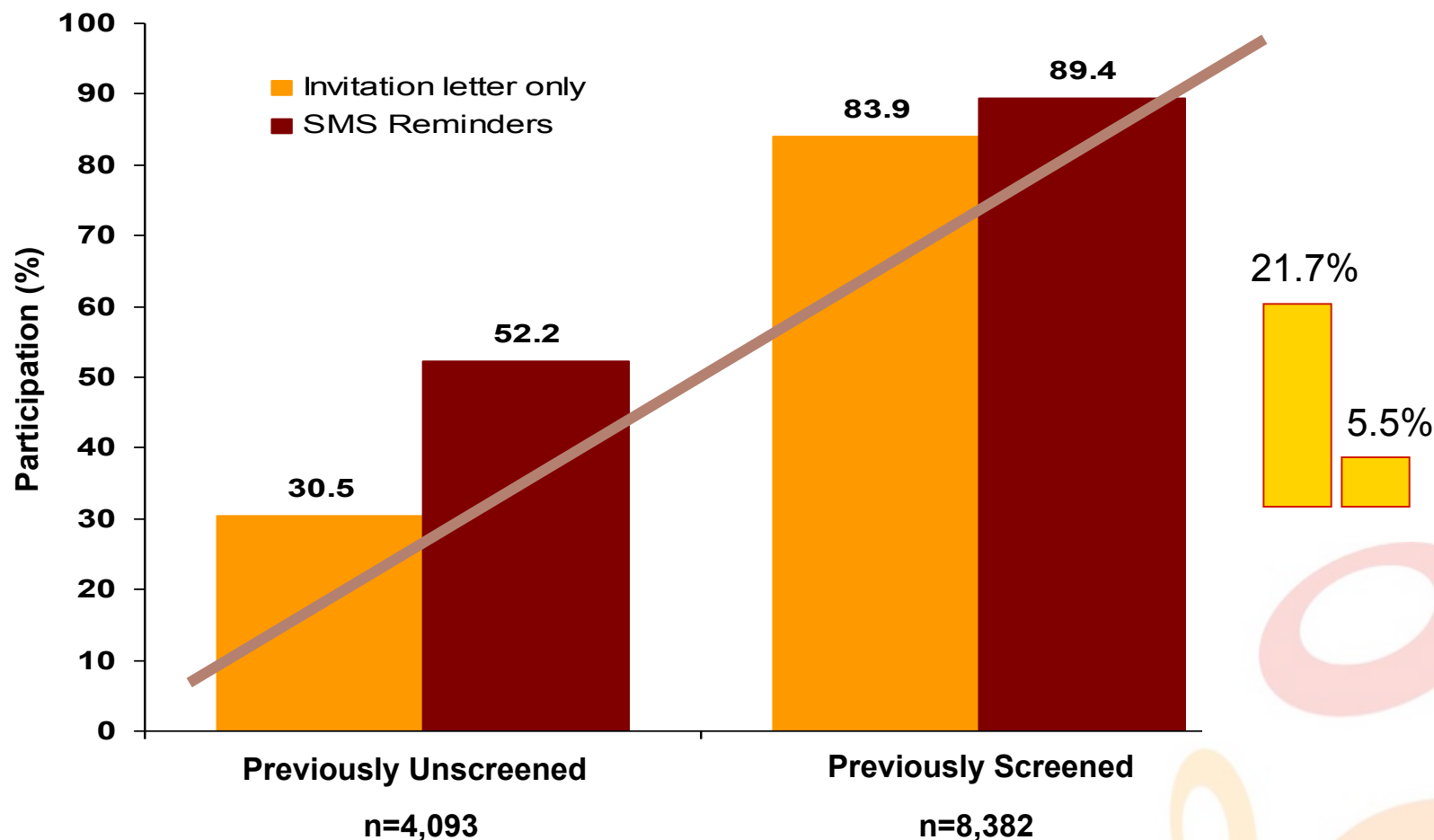
		Adjusted OR*	CI95%
Age	50-59 years	1	
	60-69 years	0.96	(0.95-0.96)
SMS reminders	No	1	
	Yes	1.84	(1.56-2.18)
Previously Screened	No	1	
	Yes	14.62	(13.04-16.39)
Accessibility	Easily to reach pop.	1	
	Hard to reach pop.	0.84	(0.75-0.93)

* Odds ratios adjusted by Age, SMS reminders, previous participation, accessibility and the following interaction terms: SMS_previous participation (p-value=0.000) + SMS_accessibility (p-value=0.000)

Results

Interaction terms

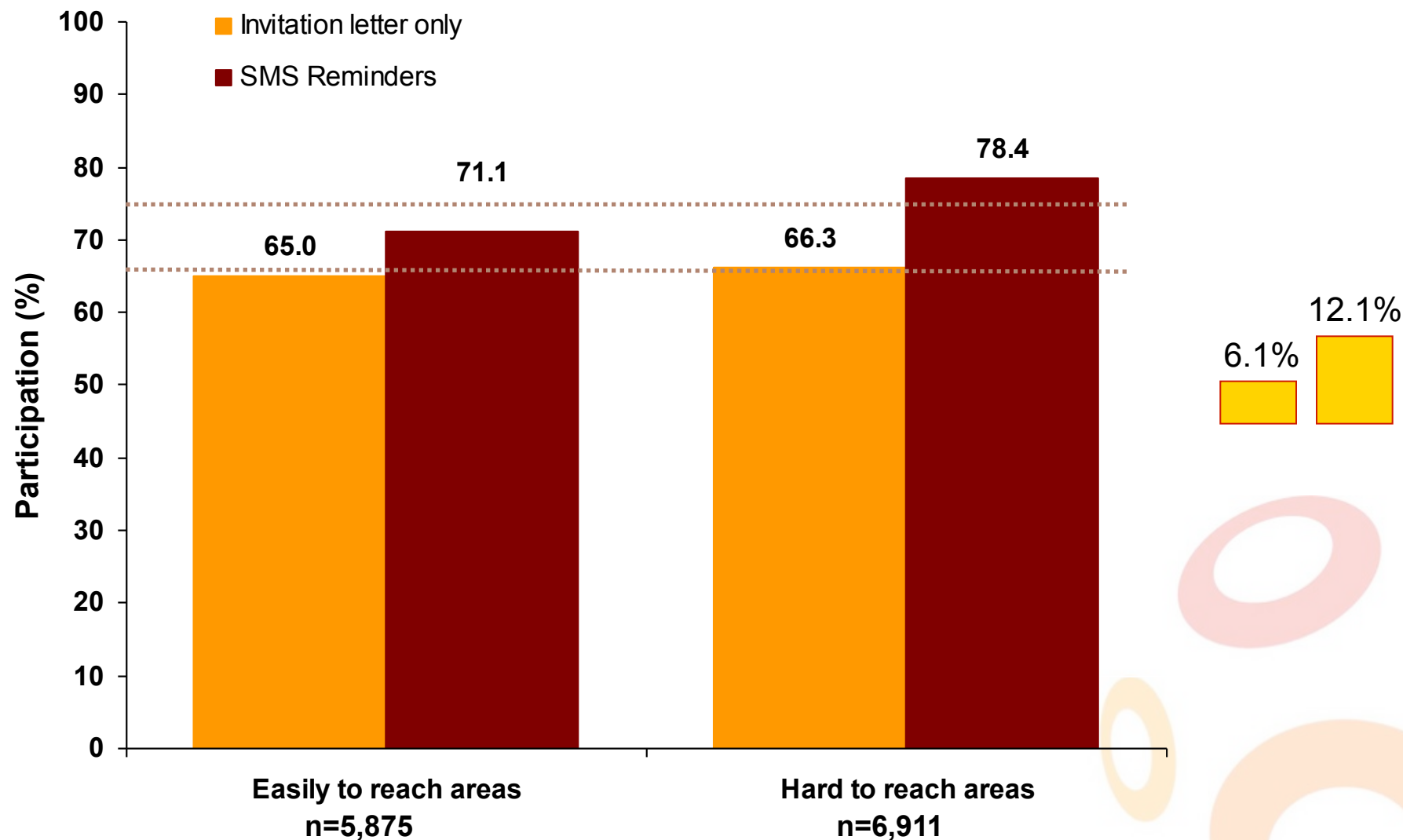
Timely participation according to previous screening behavior and SMS reminders



Results

Interaction terms

Timely participation according to accessibility and SMS reminders



Results

Rescheduled appointments

Rescheduled appointments

Women who received only the invitation letter rescheduled their appointment (n=636): 7.0%; 95%CI: 6.9-7.9

Women who received the SMS reminder rescheduled their appointment (n= 308): 8.3%; 95%CI:7.3-9.2

Non statistically significant difference

Timely participation (mammogram) among women who had rescheduled their appointments

Women who received only the invitation letter rescheduled their appointment (n=513): 80.7%; 95%CI: 77.6-83.7

Women who received the SMS reminder rescheduled their appointment (n= 224): 74.2.%; 95%CI:69.2-79.1

Non statistically significant difference

Conclusions

- Sending text messages to patients' mobile phone number three days before their scheduled appointments reduces failure to attend rate at relatively low cost.
- The breast cancer screening program could use text messaging as an alternative approach to contact hard to reach population.

