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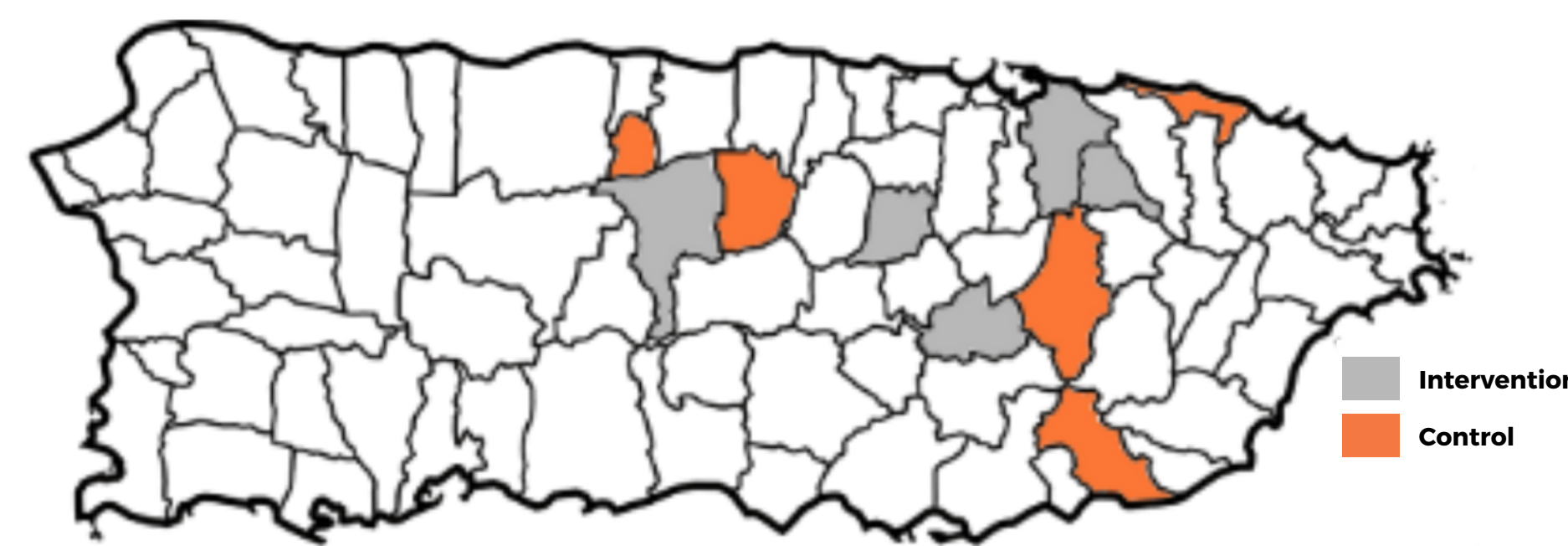
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## Introduction

- Colorectal cancer (CRC) is the leading cause of cancer death in Puerto Rico and third among Hispanics in the USA.
- Although largely preventable through screening, CRC screening remains low in PR.
- The Behavioral Risk Factor Surveillance System indicates that of adults aged 50-75 in PR only 9.5% had an FOBT within the past year and 52.3% a colonoscopy in the past ten; rates well below the National Colorectal Cancer Roundtable goal of 80%.
- Given the low screening rates, we developed ¡Salud!, por la Vida (SPLV), a tailored interactive multimedia educational program aimed to increase screening in non-adherent adults aged 50 to 75.

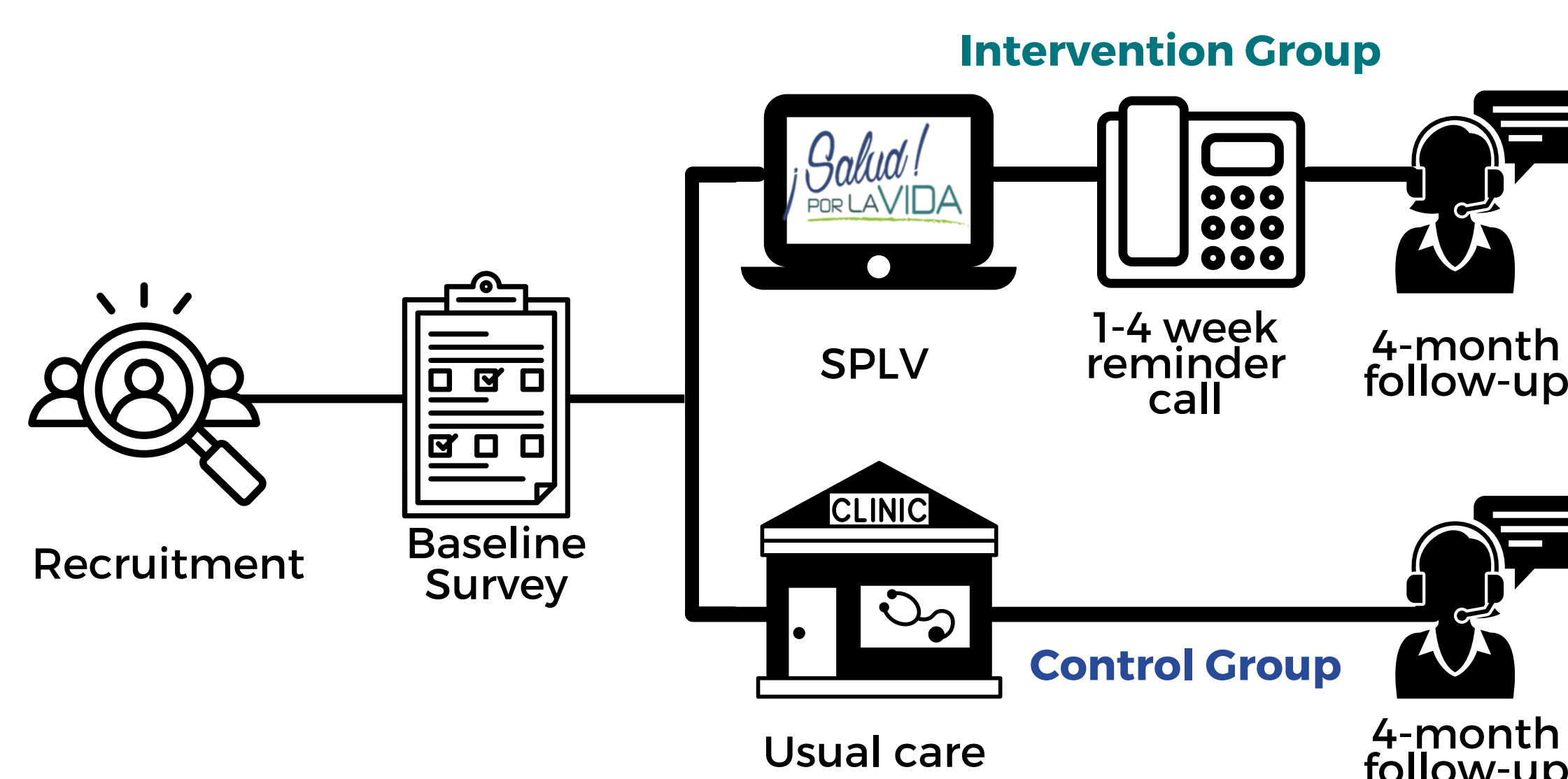
## Objective

Increase CRC Screening among non-adherent patients, men and women, aged 50 and older attending Federally Qualified Health Centers in Puerto Rico.



## Methodology

- We conducted a group randomized controlled trial in Federally Qualified Health Clinics (FQHC) in PR.
- FQHCs were randomly assigned to either intervention or comparison condition.
- Participant eligibility criteria included: FQHC patients, aged 50-75 with no history of CRC, and who are non-compliant with screening.
- All participants completed eligibility, provided consent, and completed baseline.
- Intervention participants also received SPLV educational intervention.
- CRC screening completion for all participants was obtained through chart review as well as a follow up call.



## Tailored Multimedia Intervention



SPLV community health worker with participant at intervention clinic

### Scene 10: Colonoscopy and Polyp Removal

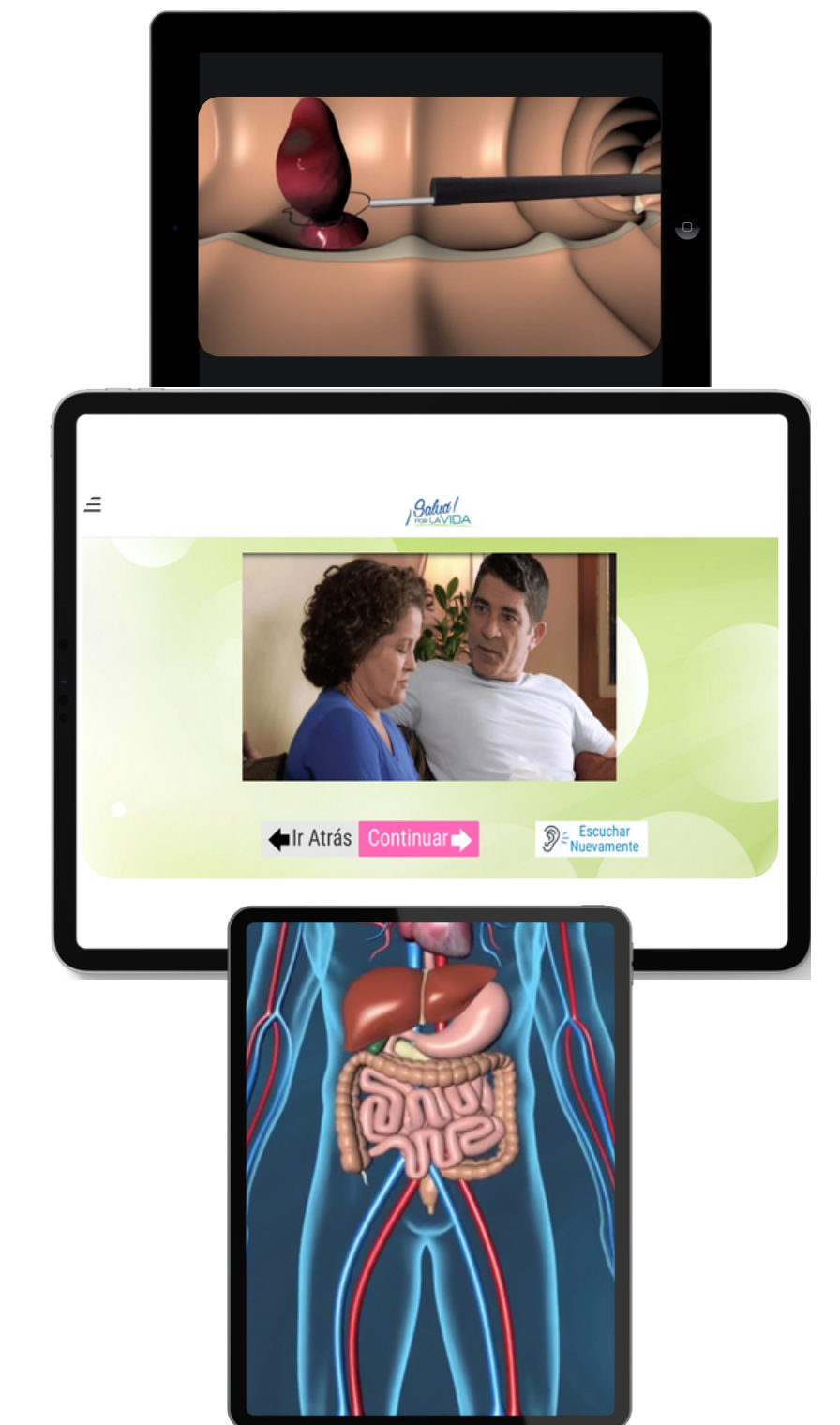
- Animated representation of a Colonoscopy and how polyps are removed if found. Similar scene is presented for FOBT/FIT screening.

### Scene 1: Carmen & Manuel Introductory Video

- Presents the story of a couple who decides to get screened for CRC. Scene starts with an infomercial in which Dr. M. Cruz exhorting viewers to get screened. A series of scenes presents the couple talking with their provider and with friends about CRCS; hence breaking screening barriers.

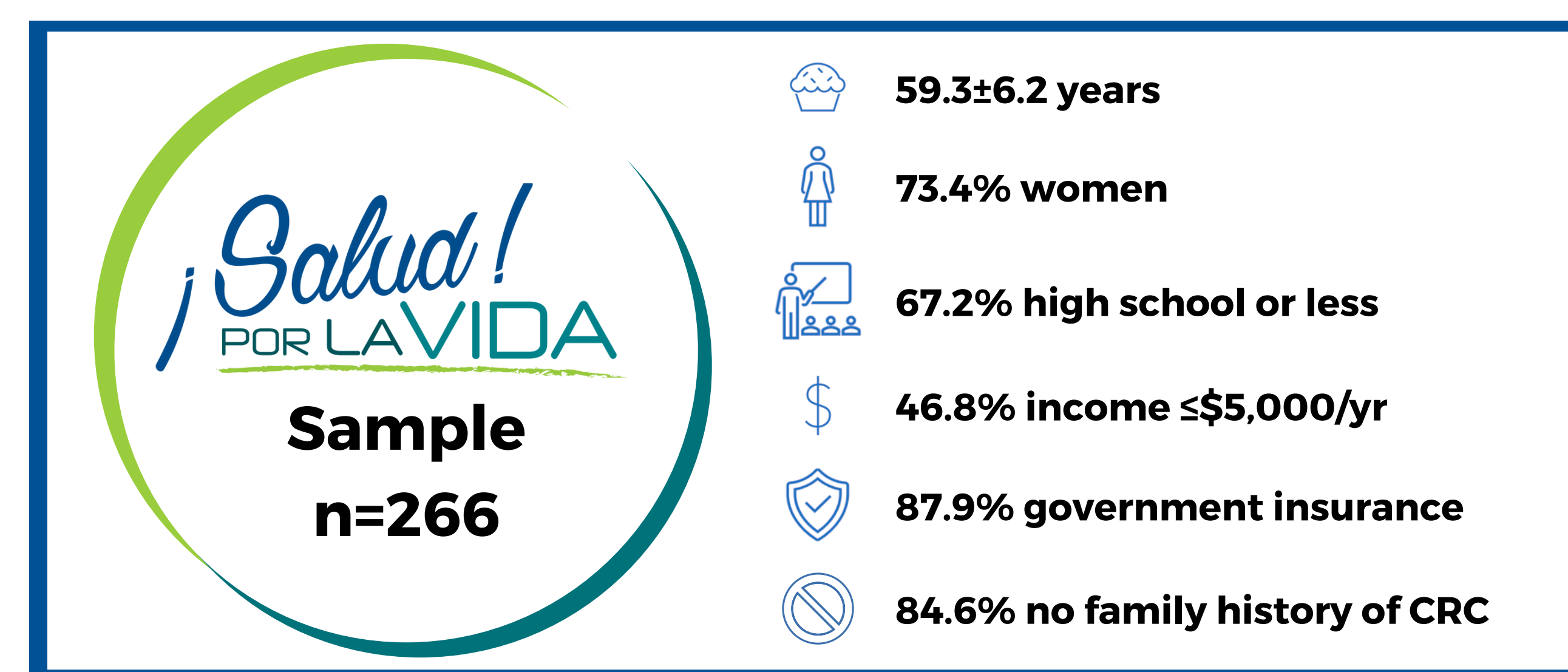
### Scene 3: Colorectal Cancer Explanatory video

- Animated video of how CRC develops and how this polyps can grow and become cancer.

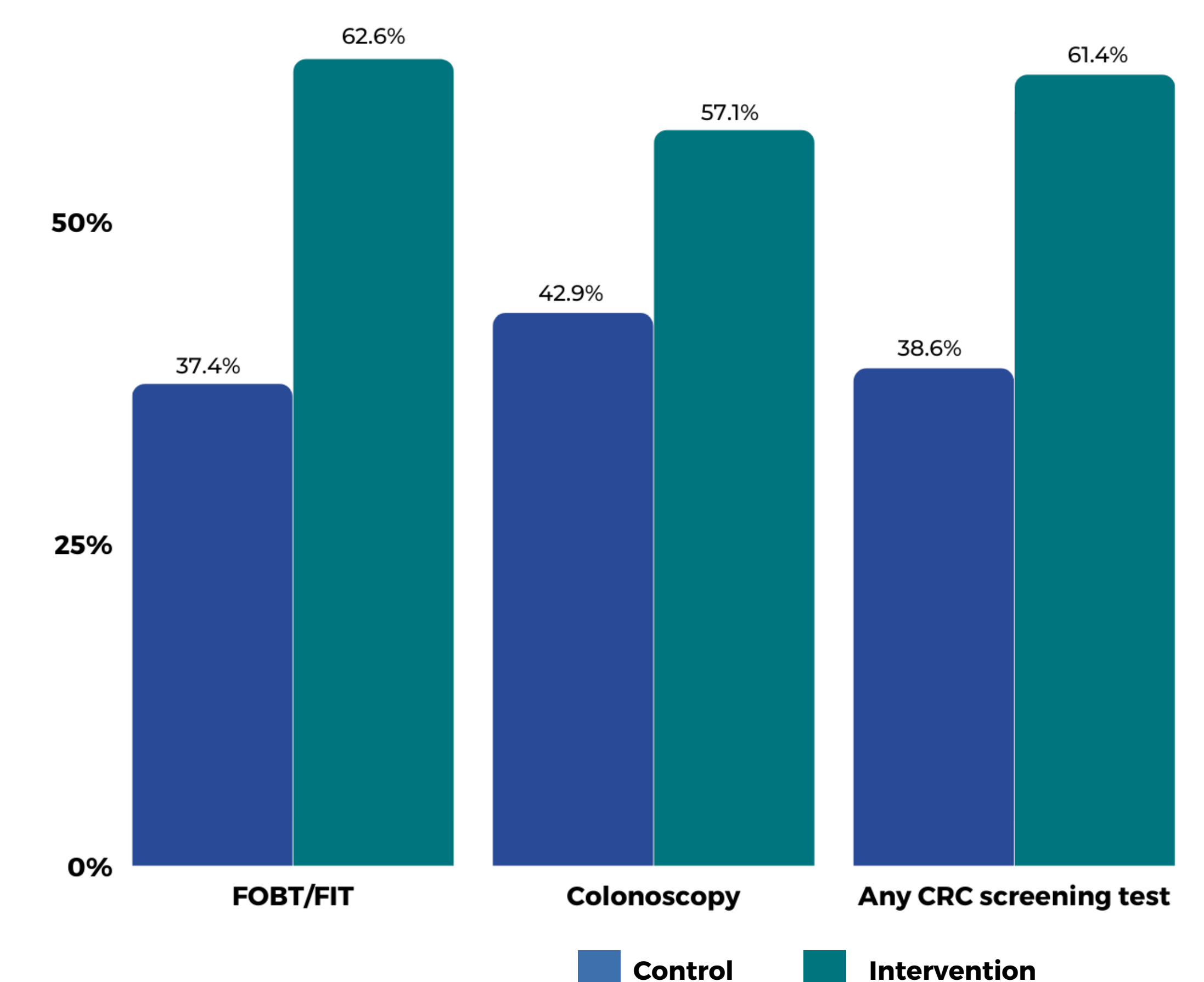


## Results

- 329 participants were recruited at 10 FQHCs.
- After the SPLV intervention was completed, 61.4% and 38.6% (colonoscopy p-value <0.011, FOBT/FIT p-value <0.015) of participants at intervention and comparison clinics, respectively, had completed a CRC screening test



Completion of CRC screening (self-report) at 4-months follow-up by study group.



## Conclusion

The SPLV intervention significantly increased CRC screening rates and provided evidence to disseminate this educational effort to FQHCs in PR. Future efforts should include testing and culturally adapting the intervention for U.S. Hispanics.

**Related literature:** 1.Sierra, I., Pérez-Mayoral, J., Rosado, K., et al. (2020). Implementation of Universal Colorectal Cancer Screening for Lynch Syndrome in Hispanics Living in Puerto Rico. J. Racial and Ethnic Health Disparities. <https://doi.org/10.1007/s40615-020-00876-7>. 2. 1.Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 2015 BRFSS Prevalence & Trends Data. Retrieved August 3, 2018 from <https://www.cdc.gov/brfss/brfssprevalence/>

**Funding:** This work was supported by the National Cancer Institute/National Institutes of Health under Grant [U54CA096297]; National Cancer Institute through a Community Networks Program Center under Grant [U54 CA153505]; and the National Institute on Minority Health and Health Disparities of the National Institutes of Health under Award Number [2U54MD007587]. W.A.C. was supported by the National Cancer Institute-sponsored pre- and postdoctoral cancer training programs [R25CA057712, R25CA116339].





# Knowledge, Attitudes, and Beliefs About Colorectal Cancer Screening in Puerto Rico.

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## INTRODUCTION

- Colorectal cancer (CRC) is the leading cause of cancer death in Puerto Rico (PR) and third among US Hispanics [1].
- The age-adjusted incidence rate by county in PR between 2012-2016 was 51.6 and 34.8 per 100,000 men and women, respectively. [2]
- Local data show that only 39.9% of CRC patients were diagnosed with localized-stage CRC, while 33.6% were diagnosed with regional-stage CRC, and 15.4% with distant stage CRC.
- The Behavioral Risk Factor Surveillance System (2018) indicates that only 9.5% of adults 50-75 years of age living in PR have had an FOBT within the past year and 51.2% had a colonoscopy in the past ten years [3].

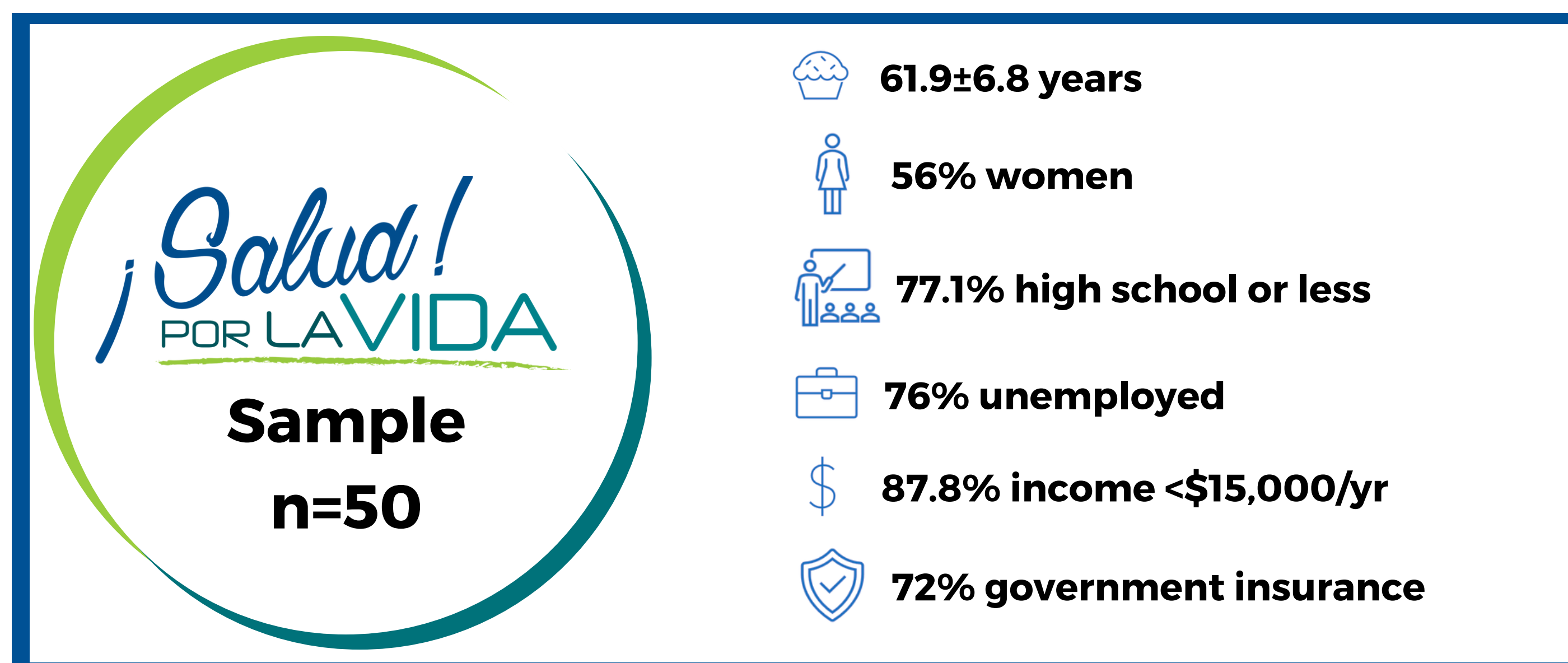
## OBJECTIVE

To describe the psychosocial factors influencing participation in colorectal cancer screening (CRCS) among Puerto Rican men and women.

## METHODOLOGY

- We conducted seven (7) focus groups in metropolitan and rural areas of PR with men and women (using gender specific groups) aged 50 to 80 years (n= 51) who were non-adherent to CRCS guidelines.
- The focus group guide included questions related to CRC and CRCS knowledge, attitudes, and beliefs.
- We analyzed data using a modified grounded theory approach to identify emergent themes.

## RESULTS



**Related literature:** 1.Sierra, I., Pérez-Mayoral, J., Rosado, K., et al. (2020). Implementation of Universal Colorectal Cancer Screening for Lynch Syndrome in Hispanics Living in Puerto Rico. J. Racial and Ethnic Health Disparities. <https://doi.org/10.1007/s40615-020-00876-7>. 2. Alvarado-Ortiz, personal communication, May, 2020 3. Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 2018 BRFSS Prevalence & Trends Data. Retrieved June 1, 2022 from <https://www.cdc.gov/brfss/brfssprevalence/>

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## FACTORS INFLUENCING CRCS BEHAVIOR

- lack of CRC knowledge
- lack of time
- embarrassment
- financial burden
- low perceived benefit of CRCS and sense of fatalism
- transportation (mostly among participants in rural areas)
- lack of knowledge about CRCS tests as well as the required preparation

## FOCUS GROUP QUESTIONS

### Awareness and Knowledge about CRC and prevention.

- Have you heard about colorectal cancer or colon cancer?
- What do you think is colorectal cancer?
- What have you heard about colorectal cancer?
- Who can get colorectal cancer?
- Do you think colorectal cancer affects more than one group of people (men, women, and the elderly)?
- Do you think that you could ever have this disease in your life? Why? Why not?
- What are some ways to prevent colorectal cancer?

### For never-screened people: Attitudes toward CRCS

- Have you ever thought about being screened for CRC?
  - Can you talk about some of the reasons why you have never been screened for CRC?
  - What things would help you to be tested?
- If you want to be screened for CRC today, what would you do to: (a) Make transportation arrangements? (b) Manage the barriers that prevent you from being screened? (c) Handle problems with the health insurance plan or medical referral? (d) Decide to be screened? & (e) Work with the possible fears that prevent you from being screened?

### Communication with PCP

- How would you describe your relationship with your primary care provider?
- Does your doctor talk to you about early screening tests for people your age?
- Can you describe your experience with referrals for diagnostic tests or early detection tests?

### Recommendations about educational materials

- Which information regarding colorectal cancer and early detection tests presented in these educational materials do you understand are important?
- How would you like to see this material presented?
- In what format would you like to have this information?

## OUR PARTICIPANTS SAID...

Urban area Rural area

- "Look, I understand a little about CRC. I will not be able to answer your question, because I understand just a little ...."
- "I have not heard much (about CRCS)...."
- "...some of my friends sometimes tell me things that make me afraid of [the procedure]. They tell me that it hurts... Believe me ... I have not had it done out of fear."
- "I have not done it because, hmm... I have felt a little embarrassed if you want me to tell you, to be honest. I have felt a little embarrassed, and I have not wanted... Embarrassment is always there, as I say... I think I must emotionally prepare myself more than physically."
- "I do not have a car; most people here do not have a car. We depend on [public transport] to take us and wait for us. Appointments are distributed in order of arrival, and they start to distribute them at 4 am. Suppose [you] arrive at 9:30 am, by the time you arrive the appointments are too late and you have missed the chance [to be seen]. It's a barrier for us here in Castañer."

## CONCLUSION

- In this group of Puerto Rican participants who were non-adherent to CRCS, there were misconceptions about CRC, screening tests available, and preparation and testing procedures.
- Participants' low levels of knowledge and negative attitudes concerning CRCS and low reported provider recommendation were important deterrents to screening.
- Given the high CRC mortality rates in PR and low screening, it is important to better understand why screening rates are so low and to develop interventions to increase screening and follow-up care. These findings suggest the need for educational efforts to increase knowledge and attitudes about CRCS and improved patient-provider communication to reduce missed opportunities to recommend.

## ¡Salud! por la Vida Educational Intervention

Please visit the Puerto Rico Cancer Outreach Program website, of the UPR/MDACC Partnership of Excellence in Cancer Research, for more information on our educational intervention.

[www.canceroutreachpr.org](http://www.canceroutreachpr.org)

