

Improving Adherence to Colorectal Cancer Screening Through Education and

Reminder Phone Calls



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Abstract

Our study looks at the effect tailored education on how to use the FOBT in addition to reminder phone calls and CRC brochures have on increasing adherence rates. Results for our study show a statistically significant adherence rate of 68% (p-value <0.003) with participants in the experimental group being 2.2 times more likely to complete FOBTs than the control group.



Alameda County Medical Center (Highland Hospital)

Methods

- Study Population: **228 men and women** over the age of 50 from the Highland Hospital Medical Clinic
- **Qasi-Experimental Study Design:** Control and Experimental groups selected from same clinic on different days
- **Control Group:** Only received Fecal Occult Blood Test (FOBT) from medical assistant
- **Experimental Group:** Received FOBT + Instructions on how to use FOBT + Reminder Phone Call + CRC informational brochure + Potential 2 follow up reminder phone calls

Demographics

Variable	Groups	
	Control	Experimental
Total	114	114
Gender		
Male	49	56
Female	65	58
Ethnicity		
African American	19	58
Asian American	31	17
Caucasian	22	15
Hispanic	36	21
Other	6	3
Age		
<59 years	49	67
>60 years	65	47

Discussion

- Experimental Group **2.2 times more likely** to return FOBT than control group
- **Higher** return rate than previously published interventions [3]
 - Our return rate: 68%
 - Other Studies Return Rate: 40-50%

Experimental vs Control Group Differences

- Non-white ethnicities more likely to return FOBT
- Gender and language were not found to have significant odds ratios

Experimental Group Differences

- 1st Follow up call associated with a less likelihood to return FOBT
- All other factors (Gender, ethnicity, language and specific interventions) were not associated with increased or decreased likelihood to return FOBT

Limitations

- Lack of randomization
- Lack of data on other factors known to be associated with poor return rates: education level, income, and past CRC screening adherence.
- Difficulty in assessing which arm of the intervention had the most significant impact.

Introduction

- Colorectal Cancer (CRC) is the **third most common** cancer in the U.S. [1]
- One in three adults over the age of 50 have not been screened for CRC, an estimated **20 million** people [2]
- Overall studies have shown that within even minimal intervention methods (reminder phone calls and letters), screening rates do improve but only to adherence levels of 40-50% [3]



Fecal Occult Blood Test

Results

Overall Results

Return Rate: **Experimental 68% vs 48% in Control Group (p-value 0.003)**

Logistic Regression Between Control and Experimental Group

Log likelihood = -143.91

LR chi2(4) = 22.54
Prob >chi2 = 0.0002
Pseudo R2 = 0.0726

Returned	Odds Ratio	Std. Error	z	P> z	[95% Conf. Interval]
GENDER					
Female	0.625	0.182	-1.61	0.107	0.353 1.107
ETHNICITY					
Non-Caucasian	2.693	1.065	2.5	0.012	1.24 5.85
GROUP					
Experimental	2.246	0.641	2.83	0.005	1.283 3.931
LANGUAGE					
Non-English	2.066	0.799	1.87	0.061	0.968 4.412
_cons	0.459	0.179	-1.99	0.047	0.213 0.988

Logistic Regression Within Experimental Group

Log likelihood = -41.70

Number of Observations= 114
LR chi2(7) = 60.29
Prob >chi2 = 0.0000
Pseudo R2 = 0.4196

Returned	Odds Ratio	Std. Error	z	P> z	[95% Conf. Interval]
GENDER					
Female	0.656	0.382	-0.72	0.469	0.209 2.054
ETHNICITY					
Non-Caucasian	1.446	1.248	0.43	0.669	0.266 7.852
LANGUAGE					
Non-English	2.163	1.808	0.92	0.356	0.421 11.134
INTERVENTIONS					
Prelim Call	2.497	2.204	1.04	0.300	0.4428 14.082
CRC Material	2.935	2.123	1.49	0.137	0.7110 12.112
F/U #1	0.0200	0.016	-4.96	0.000	0.0042 0.0939
F/U #2	0.925	0.903	-0.08	0.937	0.136 6.269
_cons	1.255	1.508	0.19	0.850	0.119 13.232

Conclusion

- Education and reminder phone calls in combination found to have largest impact on CRC screening rates
- Significant increase in CRC screening rates in low-income, Medi-Cal population
- High potential to be cost effective vs other screening methods (FOBT \$20 vs colonoscopy \$2,000)
- Further research needs to be done to develop intervention into standard practice at clinics

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Works Cited

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